REPORT

ON THE WORKING OF THE

DEPARTMENT OF AGRICULTURE

FOR THE YEAR

1964

Department of Information — Valletta
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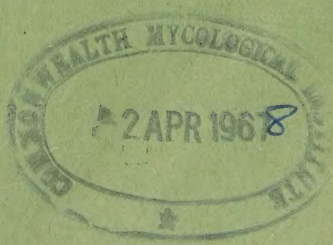


DEPARTMENT OF AGRICULTURE
93, Archbishop Street,
VALLETTA.

10th April, 1967.

Sir,

I have the honour to transmit you my Report on the working of the Department of Agriculture for the calendar year 1964.

I have the honour to be,
Sir,
Your obedient servant,

(A.S.Farrugia)
Director of Agriculture
and Fisheries

The Honourable,
Minister of Trade,
Industry and Agriculture,
Valletta.

CONTENTS

Chapter		Page
	Staff List of Senior Officers	2
I	Department of Agriculture and Fisheries and Co-operatives	3
II	Agricultural Development	4
III	Extension Service Division	10
IV	Veterinary Services Division	12
V	Horticulture Division	22
VI	Public Gardens, Plantations and Afforestation Division	26
VII	Marketing Division	28
VIII	Plant Protection Division	31
IX	Government Farms and Stock Stations Division	35
X	Viticulture and Oenology Division	37
XI	Land and Water Use Division	39
XII	Gozo Division	43
XIII	Co-operatives Division	47
XIV	Fisheries Division	48

Tables

Agriculture

1.	Weights and Measures	52
2.	Farm Population etc.	53
3.	Grants and Loans	54
4.	Imports of Seed Potatoes	55
5.	Exports of Ware Potatoes	56
6.	Exports of Onions	57
7.	Sales of Vegetables from Pitkali Markets	58
8.	Sales of Fruit from Pitkali Markets	59
9.	Yearly enumeration of Livestock	60
10.	Diseases and other causes of unsoundness	61
11.	Vaccination of pigs and inoculation of poultry	62
12.	Stocks of imported store cattle	63
13.	Slaughterings	64
14.	Respective weights in rotoli of animals slaughtered	65

Co-operatives

15.	Register of Co-operative Societies	66

Fisheries

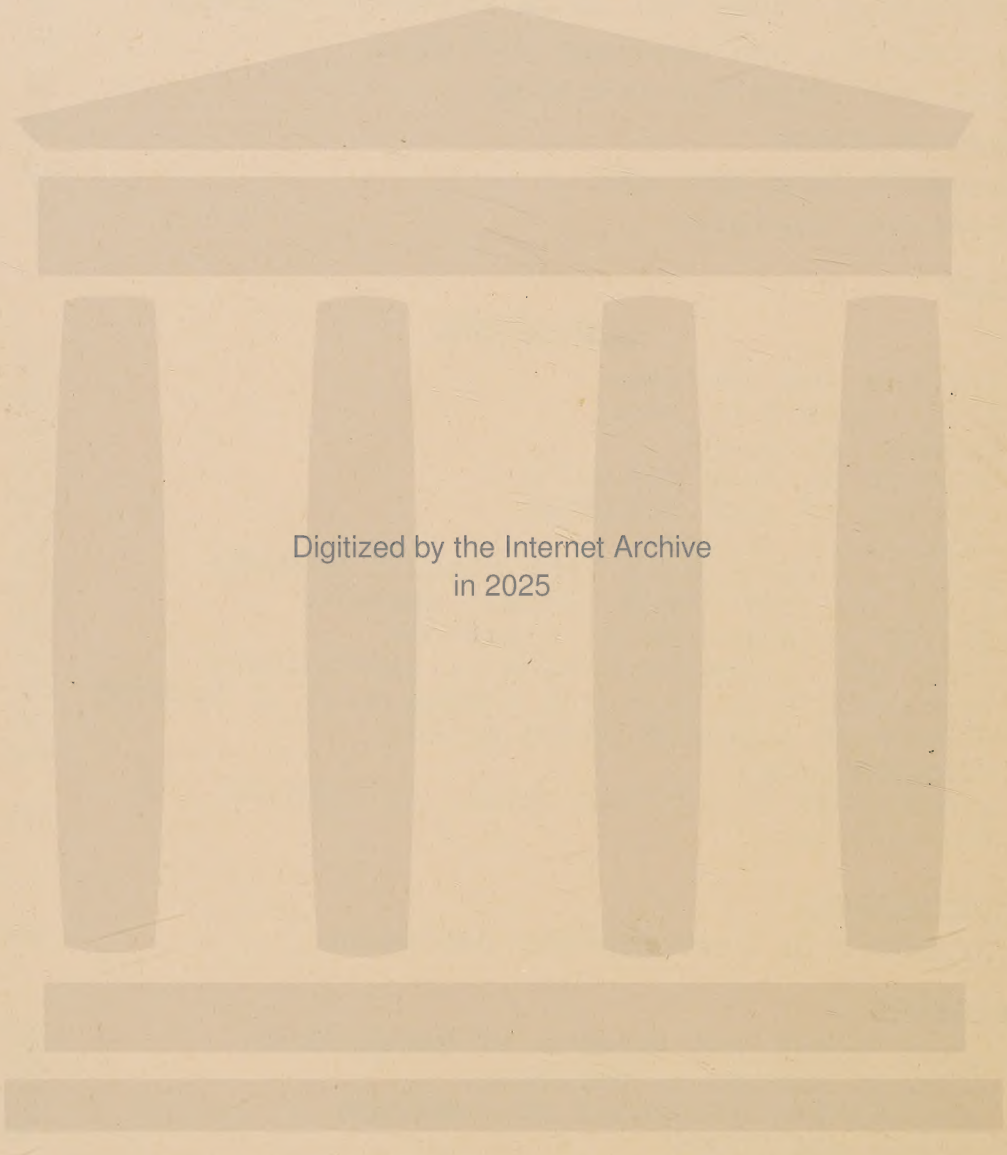
16.	Local catch and imports of Fresh Fish	67
17.	Monthly Return of catches	68
18.	Comparative statement of landings	69
19.	Grants and Loans	70

Department of Agriculture

20.	Expenditure	
	i) Ordinary Expenditure	71
	ii) Special Expenditure	72
	iii) Co-operatives	
	iv) Pitkali Markets	
	v) Capital Expenditure	73
	vi) Revenue	74

Exports

21.	Value of Agricultural Exports	75



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STAFF LIST OF SENIOR OFFICERS AS ON 31st DECEMBER 1964

Administrative and Executive Officers

Major Victor J.Castillo, E.D.	Director of Agriculture
Mr Joseph Amato Gauci	Assistant Director of Agriculture
Mr Anthony S.Farrugia, B.Sc. (Econ.) B.Com.	Administrative Officer
Mr Carmel Libreri, D.P.A.	Higher Executive Officer
Mr Edgar Causon	Higher Executive Officer
Mr Carmelo Spiteri	Higher Executive Officer
Mr Thomas Abela Fitzpatrick D.P.A.	Executive Officer
Mr Carmel Callus	Executive Officer
Mr Joseph Buhagiar	Executive Officer

Technical Officers

Mr André Cassar B.Sc.,B.V. Sc., M.R.C.V.S.	Principal Govt.Vet.Surgeon and Director of Govt.Vet.Services
Mr George Cousin	Supt.of Public Gardens and Plantations
Mr John Debrincat	Senior Agricultural Officer
Mr Joseph Frendo	Chief Fisheries Officer
Mr Charles Galea Enriquez B.A.,M.Sc.,F.R.Econ.S.	Agricultural Economist
Dr.Gerald J.Peralta, D.Sc. (Agric.), F.Z.S.	Plant Pathologist
Mr Francis P.Portelli B.Sc.(Hort.),B.Pharm.	Horticulturist
Mr Louis J.Saliba B.Sc., B.Pharm.,B.Sc.(Hon.) London M.I. Biol.,F.R.E.S.	Plant Pathologist and Entomologist
Mr A.Scicluna Spiteri,B.Pharm., B.Sc.(Agric.),M.Sc.,F.R.M.S.	Agricultural Chemist
Mr S.J.Zammit, F.R.H.S.	Supt.of Government Farms
Mr Edward Ebejer Slythe, C.D.A. C.D.D.	Higher Agricultural Officer
Mr Victor T.Restall,B.Sc., Ph.C.,M.R.C.V.S.	Assistant Government Veterinary Surgeon
Mr Joseph Buttigieg, C.D.A.	Agricultural Officer
Mr Saviour P.Camilleri,C.D.A.	Agricultural Officer
Mr Joseph Debattista, N.D.A., C.D.A.,N.D.Agric.E.,A.M.I.	Agricultural Officer
Mr Clive Simpson,N.D.A.,C.D.A.	Agricultural Officer
Mr Dominic Sultana,N.D.A., C.D.A.,N.C.P.,C.C.P.	Agricultural Officer
Mr Peter Calamatta,C.D.A.	Agricultural Officer
Mr Victor Rossignaud	Agricultural Marketing Officer

United Kingdom Advisers

Mr Louis J.Littlejohn B.Sc.(Hons.)	Chief Agricultural Advisory Officer
Mr J.Gillow	Horticulture Advisory Officer

W.H.O. Expert

Mr Godfrey G.Alton,B.Sc., M.R.C.V.S.	Veterinary Bacteriologist

F.A.O. Expert

Mr Robert W.Crowther B.Sc., M.R.C.V.S.	Animal Health Officer (Veterinary Laboratory)

CHAPTER I

The Department of Agriculture, Fisheries and Co-operatives

General

The Department made a great stride in the year 1964 which ushered in the 2nd Five-Year plan. The Capital Expenditure of £592,542 in the First Plan was increased to one of £1,084,958 for the current quinquennium, thus almost doubling the estimated expenditure. Many new activities were contemplated, all designed for a quick rational development in agriculture, fisheries and co-operatives.

Divisions in the Department

The Department is divided into the following distinct divisions each of which is under the immediate charge of a divisional head officer:-

i) Administrative Division under the Assistant Director of Agriculture.

ii) Advisory and Extension Service under the Higher Agricultural Officer.

iii) Veterinary Services under the Principal Government Veterinary Surgeon.

iv) Diagnostic Laboratory under the Laboratory Veterinarian.

v) Brucellosis Laboratory under the Veterinary Bacteriologist.

vi) Horticulture Division under the Horticulturist.

vii) Public Gardens, Plantations and Afforestations Division under the Superintendent of Public Gardens.

viii) Marketing Division under the Agricultural Economist.

ix) Crop Protection Division under the Plant Pathologist and Entomologist.

x) Government Farms and Stock Station Division under the Superintendent of Government Farms.

xi) Viticulture and Oenology Division under the Plant Pathologist.

xii) Land and Water Use Division under the Agricultural Chemist.

xiii) Gozo Division under the Senior Agricultural Officer.

xiv) Co-operative Society Division under the officer in charge of Co-operative Societies.

xv) Fisheries Division under the Chief Fisheries Officer.

CHAPTER II

AGRICULTURAL DEVELOPMENT
CAPITAL EXPENDITURE

AGRICULTURE

1. Cattle Disease Eradication Scheme

The Government of Malta, following a visit in 1955 by R.S.Marshall, then Adviser on Animal Health to the Secretary of State for the Colonies, adopted a policy for the eradication from the Maltese Islands of the diseases caused by Brucella abortus and by Tuberculosis in dairy cattle.

The objects in undertaking this scheme were:-

a) to improve the efficiency of the dairy industry by eliminating the very considerable losses caused by these diseases;

b) to provide additional safeguards to the public health by eradicating tuberculosis from cows; and

c) to improve the quality of the herds so as to make possible the export of surplus animals to markets in neighbouring countries.

It was anticipated that the sum of £54,385 would be spent over the 5-year period. Of this sum, the amount of £21,100 was estimated to be spent during the financial year 1964/65.

2. Incentive Grants to farmers

The introduction of new techniques in agriculture inevitably meets with some resistance because of the conservative outlook of most farmers. This natural conservatism is reinforced by the fact that few of the small farmers can afford to risk money on anything which has not been thoroughly proved by local use and practice for many years.

A sum of £40,090 was provided for the current quinquennium. This was intended to be utilized by various means such as providing a temporary subsidy on new varieties of crops, new farm chemicals or new feeding-stuffs or by making a grant towards the purchase of specified equipment or, where applicable, by Government purchasing material and selling it at a subsidized price. The allocation for the current year was £12,660.

3. Expenses in connexion with Experts

The Department of Agriculture has made rapid

progress../..

progress in enlisting the services of qualified expatriate officers during the last few years.

In 1957, Mr O'Brien, Adviser on Organization and Methods, advised that there should be a Senior Technical Officer who should co-ordinate the technical activities of the Department.

An expatriate is, therefore, necessary to fill this very important post until a local officer is found who is able to assume such duties.

Another key post is that of Agronomist/Plant breeder. Such an officer would work on the improvement of "Sulla" and on other cereals and field crops.

It was estimated that, for the period 1964/69, the sum of £39,615 would be required, of which £2,915 would be provided for the year under review.

4. Training of Personnel Abroad.

Malta is a small Island and there are no Universities where agricultural and fishery subjects at a high level are taught. The need, however, for qualified personnel is there and, hence, local staff have to receive their academic training abroad.

Senior Officers, near the retiring age, will shortly have to be replaced. Also, the increasing activities of the Department are making the need for more academically qualified officers increasingly felt.

At present there are three trainees abroad, two in Veterinary Science and one in Agriculture.

The sum of £32,705 was provided for the current quinquennium. The amount for the financial year 1964/65 was £4,220 whilst the actual expenditure came up to £1,956.

5. Loans and Grants to farmers

Under existing conditions in Malta, where the vast majority of farmers are tenants and where rents are strictly controlled, shortage of investment capital for improvement of the agricultural industry is one of the main factors inhibiting development. To encourage development, therefore, loans and grants were provided.

The sum of £100,000 was allocated to provide for the purpose for grants and a further sum of £150,000 was provided to advance loans to farmers during the quinquennium. The allocations for the current financial year were £13,200 in respect of grants, and £19,800 of loans.

6. Public../..

6. Public Gardens, Plantations and Afforestation

Public gardens, plantations and afforested areas are being enlarged and more trees are being planted where hitherto nothing but barren rock existed.

The preponderance of trees planted so far have been the olea and ceratonia but now it is possible to be more selective and, in addition to giving the arid zones a green look, some colour will also be provided by introducing, where convenient, decorative flower bearing trees such as oleanders, acacia and jacaranda.

£68,243 was provided for the quinquennium. Of this amount, the sum of £10,000 was made available for the financial year 1964/65.

7. Cattle Quarantine Station.

Malta and Gozo being very small Islands, the isolation of infected animals is a very difficult matter. It is well known that the live animal is the most serious means of disease transmission.

The animal population in Malta and Gozo comprises 8,000 bovines, 29,000 caprines, 11,000 ovines and 13,000 swine.

The incubation period of the Foot and Mouth Disease is from one to ten days and hence, cattle may be landed in Malta and put in lairages apparently clean when actually they may be carriers of the dreaded virus. This makes the provision of a cattle Quarantine Station an urgent necessity.

The sum of £42,200 was provided for such a purpose under the current development plan. Of this amount, the sum of £26,375 was allocated for the financial year 1964/65.

8. Equipping and Staffing Research Laboratory

The "Brucella Melitensis" is the organism responsible for "Malta Fever" in man and is associated with Malta because it was first recognized as such in this territory in 1886.

It is primarily a disease of goats in which it causes abortion with a consequent loss of milk and offspring.

The incidence of the disease amongst the inhabitants of the Maltese Islands has been reduced from several thousand to less than two hundred cases a year. This result was achieved by the Authorities making it illegal to offer raw milk for sale and by the concomitant expansion in the production of pasteurized milk.

The../..

The funds provided for the setting up and the running of the laboratory during the current quinquennium were £53,317 of which £14,770 was allocated for 1964/65.

9. General Development of Horticulture

The gross value of crop products sold off the farm in Malta amounts approximately to £1,750,000. The principal items are potatoes and onions, valued at £400,000; vegetables, including tomatoes, at £800,000; fruit, including grapes at £400,000, cut flowers and plant cuttings valued at over £150,000.

There is scope for considerable expansion particularly in horticulture. Imports of fruits are very heavy exceeding £400,000 in value whilst exports are negligible. The former could be reduced, the latter, increased considerably.

Under the Five-Year Development Plan, a sum of £260,832 was provided of which the amount of £50,295 was earmarked for expenditure in 1964/65.

10. Assistance to Co-operatives

Co-operative production of tomato paste has been established for some time but other projects for co-operative development are frequently discussed - wineries, potato packing, egg-grading, poultry carcass processing, compound fodder manufacture and so on and so forth. Such projects, however, usually fail to materialize because of lack of capital.

It cannot be gainsaid that it would be to the advantage of the nation as a whole if the present state of affairs were to improve. To attain that end the farmer must be encouraged to co-operate in the processing of those agricultural products which are not sold direct to the consumer.

For the quinquennium in question the sum of £30,000 for grants and that of £45,000 for loans to co-operative societies were provided. During 1964/65, financial assistance will total £12,500 of which £5,000 in the way of grants and £7,500 of loans.

11. Improvements to Farmhouses

Partly as a result of damage, either by direct action or by inability to carry out normal maintenance and partly as a result of the rapid advances which have been made in agricultural techniques, a large proportion of Malta's farm equipment is either obsolete or in urgent need of repair or renovation.

It was therefore, proposed to help farmers by

giving../..

giving them financial assistance to construct or repair water storage tanks, to extend water and electricity mains to farmhouses and to effect general structural repairs or extensions in their farms.

The sum of £57,500 was provided for the whole quinquennium. For the financial year 1964/65 the amount of £9,000 was made available.

FISHERIES

12. Grants and Loans to Fishermen

It is essential, for the expansion of the industry, that the number of large and decked boats, existing at present, should be increased, as it is becoming increasingly evident that the inshore potential cannot provide fishermen with profitable catches. Indeed, over-fishing for a number of years has depleted the stocks to such an extent that, in order to keep up and possibly increase the present production, fishermen have to rely mostly on craft capable of operating in more distant waters.

The sum of £85,000 was provided for the quinquennium. Of this sum £14,500 was earmarked for expenditure during the current financial year.

13. Improvements at Marsaxlokk

Fishermen need mole space for their fishing equipment, consisting of a great variety of bulky things, such as 'kannizzati', stone weights, floats, nets, 'lampari', 'gangmu', 'koppijiet', etc.

The width of the moles at Marsaxlokk is nothing like enough for this purpose and the widening of the existing moles had, therefore, become essential.

Out of the sum of £37,980 which was provided to be spread out over the quinquennium, £2,500 was set aside to be spent during 1964/65.

14. Construction of Moles

The old fishponds at Marsaxlokk were dredged to a depth of 12 feet, thus providing a safe anchorage for all the fishing craft based on this harbour and on the creeks in the vicinity such at Wied-iż-Żurrieq, etc.

However, mooring facilities are sadly lacking and the only practicable access to the fishponds is through the sea opening. Besides, the banks where there is no rock

bed../..

bed at all, is bound to subside gradually and to silt up the whole enclosure. It is, therefore essential that a concrete embankment should be constructed to obviate the defeat of the scope for which this boat enclosure had been constructed.

The estimated cost of this project was put at £79,000 of which £15,825 was provided for the financial year 1964/65.

General

Many other works were provided for but only the most expensive projects have been reviewed in this chapter.

The sum involved under Agriculture was £1,261,968 and under Fisheries £384,793, a total of £1,646,761.

CHAPTER III

EXTENSION SERVICE DIVISION

The Extension Service Division is made up of a Higher Agricultural Officer and of seven Agricultural Officers. All these officers have studied at Agricultural Colleges in the United Kingdom and most of them are holders of the National Diploma in Agriculture.

For administrative purposes, Malta is divided into four districts, to each of which an Agricultural Officer has been assigned. Each officer is responsible for the welfare of the farming community within his particular district. Gozo is a district on its own with a Senior Agricultural Officer in charge and an Agricultural Officer helping him.

Advisory and Extension Work

The advisory and extension work comprises the following clearly marked activities:-

a) Technical advice;
b) Practical extension work, and
c) Marketing Intelligence

a) Technical advice

The Agricultural Officers tender their advice to breeders, farmers and florists. They have built up a good reputation for themselves and they are invariably consulted even by the most experienced.

b) Practical Extension Work

It is the duty of Agricultural Officers to keep in as close a contact as possible with the farming community in their respective districts. They do that by frequent visits and by organizing farmers meetings. As often as possible specialists of the Department are invited to deliver lectures at such meetings on topics of the month. Subsequently, the Agricultural Officer takes over and illustrates the salient points of the lecture. In the following days the Agricultural Officer gives practical demonstrations on the farms of individual farmers in his District. In this way improvements are becoming noticeable.

c) Marketing Intelligence

The grower is being encouraged to cultivate those crops which are in great demand on the local market and abroad. He is given advice as to grading, packing and presentation.

Chips have in this way almost disappeared and local prices as a result are becoming fairly stable. On the whole prices on the international markets were reasonably remunerative during this year.

In order to meet the strong competition met with on foreign markets, the quality of the products have been improved considerably.

d) Agricultural School

An Agricultural School has been set up and the Agricultural Officers give lectures to the students regularly. As these students are the sons of farmers, they are the farmers of tomorrow. The acquaintance made at school with these Agricultural Officers is bound to be of great mutual advantage in the days to come.

e) In the "Farmers' Half-Hour" broadcast every Sunday morning over the local rediffusion system, Agricultural Officers very frequently address farmers on items of agricultural interest.

General../..

General Service

The number of Agricultural Officers from 5 was raised to 6. One of these was specially trained in horticulture. Each of the other five was given charge of one of the four districts Malta is divided into whilst Gozo forms a district by itself.

In addition to their normal duties in the Extension Service, Agricultural Officers prepare reports for the Loans Commission contents of which are given due consideration in the preparation of the Commission's recommendations to the Minister.

CHAPTER IV
The Veterinary Services Division

General set-up

There is a Director of Veterinary Services assisted by one Veterinary Surgeon. Two qualified Meat Inspectors, one in Malta and the other in Gozo, help in meat inspection at the Civil Abattoirs. There are also four Veterinary Assistants, three stationed in Malta and one in Gozo. Besides this local staff, there are two expatriate Veterinary Bacteriologists, one engaged on Brucellosis Research and the other on Diagnostic Work mainly connected with poultry and swine.

Following the resignation of a Veterinary Surgeon, Gozo has had to remain without a resident Veterinary Surgeon, though frequent visits are paid by one or other of the two Veterinary Surgeons resident in Malta.

Meanwhile the following temporary measures had to be taken:-

a) A Senior Health Officer from the Medical and Health Department, who had been trained in Meat Inspection, was sent to Gozo from Malta to do meat inspection work there. When, on attaining the age of 60 years, he retired from the Medical and Health Department, his services as meat inspector with the Department of Agriculture were retained.

Another Health Inspector from Gozo was meanwhile being trained in Meat Inspection and whenever the former could not attend to his duties the latter substituted him.

b) The prophylactic vaccination of poultry and swine, the testing of cows for Tuberculosis and the taking of blood for Agglutination test were carried out by the Veterinary Assistant. Whenever a T.B.reactor was detected it was re-examined by the Comparative Tuberculin test after an interval of five weeks by one of the Veterinary Surgeons.

Veterinary Activities

The activities of the Veterinary Services fall under four main headings:-

a) Activities at the Civil Abattoirs;

b) Activities in the Field ;

c) Activities in the Laboratories; and

d) Activities in Artificial Insemination

a) Activities at the Civil Abattoirs

The activities at the Civil Abattoirs are an essential public service to safeguard the health of the population. By law, all animals have to be slaughtered by Government butchers at the Civil Abattoirs and the carcases inspected by either a Veterinary Surgeon or a qualified Meat Inspector.

The../..

The following table gives the kind and number of animals slaughtered:-

(i) Slaughterings from 1st January to 31st December,1964

	Cattle	Equines	Pigs	Sheep	Lambs	Goats	Kids
MALTA	9335	526	27137	5692	5594	6529	1336
GOZO	825	7	2428	294	1197	261	299
TOTAL	10,160	533	29,565	5,986	6,791	6,790	1,635

(ii) Weight in'rtal'of above number of slaughtered animals

	Cattle	Equines	Pigs	Sheep	Lambs	Goats	Kids
MALTA	2,704,667	108,469	2,251,676	209,255	52,693	160,498	7,109
GOZO	249,306	1,707	223,701	7,781	12,278	5,073	1,766
TOTAL	2,953,973	110,176	2,475,377	217,036	64,971	165,571	8,875

(iii) Diseases and other causes of unsoundness detected in the course of meat inspections.

Table 10 shows returns of meat condemned in the course of meat inspections.

Septicaemia

25 carcases, affected with Septicaemia, were totally condemned. These include Septic Metrites, Mastitis,Enteritis and Pericarditis.

(v) Putrefaction

11 carcases were condemned as being in a state of putrefaction. Emergency cases decompose and putrify quickly especially in summer.

(vi) Modernising the Civil Abattoir

Despite the fact that over £45,000 was spent on modernising the Civil Abattoir, its state still leaves much to be desired.

Efforts are being made to improve this state of affairs.

b) Activities in the field

Activities in the field consist in the prevention, control and eradication of animal and poultry diseases.

i) Prevention
Store Cattle

At present the imports of store cattle are just below 8,000. These are kept for a period of three to five months in lairages to be fattened before being slaughtered.

As importation../..

As importation goes on throughout the year, strict measures are taken to prevent the introduction of diseases. Therefore, unless the exporting country is free from foot and mouth disease, no import licence is given. Besides, the cattle are examined on unloading. They are then kept under observation for at least three days and they are again examined before being finally released.

It is due to these very strict measures that the Island has been kept free from this disease for the last 18 years.

The former Quarantine Station at Manoel Island, demolished through enemy action, has never been rebuilt but steps are being taken to have another wing built at Zammit Dock in order to have adequate accommodation.

Horses

Horses are likewise examined on arrival for 'Glanders' and 'Farcy'.

Dogs

Dogs coming from countries where 'Rabies' is known to exist, are kept in Quarantine Kennels for six months. Even though coming from a Rabies free country but they happen to have passed through a Rabies infested country, the above-mentioned precautions are likewise enforced.

Cats

Unfortunately the law does not impose quarantine conditions for cats, but, sooner or later, their importation will have to be made subject to these restrictions since cats too can be disease carriers.

ii) Control

The most prevalent animal diseases are:-

Bovines - Tuberculosis, Brucellosis and Mastitis;
Swine - Swine Fever and Swine Erysipelas;
Caprines- Brucellosis;
Poultry - Fowl Pest, Fowl Pox and Respiratory Diseases.

a) Bovines

i) Tuberculosis and Brucellosis

The Control of Tuberculosis and Brucellosis will be explained under the heading 'Eradications'.

ii) Mastitis

Mastitis is widespread and it is on the increase. Several types of Mastitis are met with in the Island. The position is difficult to control as farmers do not call for the Veterinary Surgeon but buy unprescribed intramammary penicillin and inject it into diseased udders, irrespective of the type of bacteria causing the disease.

A Diagnostic../..

A Diagnostic Laboratory has now been set up and it is hoped that herdsmen will co-operate with the Veterinary Services and start submitting milk from infected udders for routine examination.

Swine

i) Swine Fever

Swine Fever is endemic in Malta and every year this disease plays havoc among the pig population. Vaccination of pigs is the only means that is being taken to check this disease.

During the current year about 10,000 pigs were vaccinated. This is roughly equal to a third of the total number slaughtered.

Steps have been taken to import the right vaccine for the purpose and, before long, legislation for the compulsory vaccination of pigs will be enacted.

ii) Swine Erysipelas

Swine Erysipelas is also endemic but its ill effects are restricted. Whenever a case is detected the full herd is vaccinated and almost invariably cured.

Free vaccination is available and about 3,000 pigs were prophylactically vaccinated against this disease during the year.

c) Caprines

The principal disease afflicting goats is 'Brucellosis Melitensis' so called because it was first identified in Malta by Surgeon Captain Bruce.

Since 1956 Dr. G.G. Alton has been engaged on laboratory research work to assess the immunization period of the Elberg Vaccine on goats and kids.

Vaccination of kids became compulsory in 1964 and 2,000 kids were vaccinated in Gozo.

Further information about Caprines is given in the Chapter dealing with 'Research in Animal Brucellosis Section'.

d) Poultry

The diseases affecting poultry which are met with in Malta generally are:- Leucosis, Fowl Paralyses, Fowl Pox, Fowl Typhoid, Newcastle Disease and Infectious Bronchitis. These are all dealt with separately under the Chapter on the 'Diagnostic Laboratory Section'.

iii) Eradication of Animal Diseases

Tuberculosis and Brucellosis

The enactment of the Prevention of Disease Ordinance (Cap.59) was a landmark in the drive towards the control and eradication of Tuberculosis and Brucellosis.

Herdsmen have now dropped all forms of opposition and are themselves helping the Veterinary Services in every possible way to have their diseased cows slaughtered and thus keep their herds clean.

By the../..

By the end of March 1964, all the herds which supply milk to the Milk Marketing Undertaking in Malta - 233 herds with 3,844 bovines - were tested for both Tuberculosis and Brucellosis and all reactors were slaughtered. In August 1964 when these herds were re-tested only one cow was found to be affected with 'Brucella Abortus' and a hundred with 'Tuberculosis'.

This fact goes a long way to convince herdsmen that tests should be a round-the-year activity for diseases spread very easily.

C. ACTIVITIES IN THE LABORATORIES

i) Research in Animal Brucellosis

Milk from each dairy herd in the Island was tested every three months by the ring test. When a herd gives a positive reaction to this test, each animal in the herd is bled and its serum tested by the agglutination test. Milk cultures were made from each positive agglutination reactor that was in milk.

Positive animals in herds known to be infected with Brucella Melitensis were allowed to remain. Br.abortus was isolated, either before or after slaughter, from three animals, each belonging to a different owner. It is believed that the eradication of Br.abortus infection is now almost complete.

At the last series of quarterly tests, 22 herds were positive to the ring test; 17 of these contained positive agglutination reactors. One animal was slaughtered at this time and was found to be infected with Br.abortus. 35 reactors remain and we believe that these are infected with Br.Melitensis. The problem of infection in cattle caused by Br.Melitensis is being tackled by action aimed at eliminating the reservoir of infection i.e. brucellosis in the goat population.

b) Brucellosis in Goats

(i) The Wied Incita Experiment

This experiment was designed to test the duration of the immunity produced in goats by vaccination with Rev.1 Br.melitensis vaccine. The vaccinations were carried out in 1962. During the present year there were no casualties amongst the adult goats and 45 female kids were reared and are being held for future use.

In December, 25 vaccinated and 25 non-vaccinated control goats were moved from Wied Incita to the laboratory at Ghammieri so that they could be exposed to Br.Melitensis infection to test their immunity status.

At this time, eight pregnant female goats that had been reared in the brucellosis-free environment of Wied Incita Farm were artificially infected with a culture of Br.melitensis and mixed with the 50 experimental goats at Ghammieri to provide exposure to infection. The results of examinations carried out on the vaccinated and control goats should be available by the end of May 1965. It is hoped that the result will show whether or not immunity was still persisting in the vaccinated goats at this time, 2½ years after vaccination.

(ii) The passage of Rev.1 Br.melitensis Vaccine through Pregnant Goats.

This experiment, done in collaboration with and financed by the University of California, was designed to examine the possibility of a return to virulence by the

living../..

living, attenuated Br.melitensis vaccine Rev.1. This vaccine is known to cause abortion when injected into pregnant goats and the effect of its accidental use on such animals needed investigation.

Passage was started by injecting a pregnant goat and subsequent passages were attempted by injection of infected tissues or fluids from animals of the previous passage. Virulence was checked, both in Malta and in the University of California, by determining the ability of the organism isolated at each passage level to persist in guinea pigs and to compare this rate of persistence with that of the vaccine before passage.

Two passages were effected in goats in this way and the guinea pig tests indicated that no change in virulence had taken place. Two separate attempts at a third passage of Rev.1 in goats failed. This was possibly due to the fact that the number of organisms excreted at each passage became less, until by the third passage, the number that could be injected was not sufficient to cause abortion or excretion.

These results suggest that Rev.1 is stable, at least for a small number of passages through pregnant goats, but it is planned to carry the number of passages further during 1965 by resorting to culture of the organism between passages in order to equalize the number of bacteria injected at each passage.

(iii) The Vaccination of Goats in the Field.

During 1964, legislation came into effect empowering the Director of Agriculture to enforce compulsory vaccination of all female kids between the ages of 3 and 6 months. This was first applied in the Island of Gozo and, during the latter half of 1964, a total of 1,782 kids were vaccinated in that Island. It is intended to carry out compulsory vaccination of kids in Malta also. During 1964, 788 goat adults and kids were vaccinated in Malta, making a total of vaccinations for the two Islands of 2,570.

(iv) Miscellaneous

Routine work, carried out in the laboratory, included the production of Rev.1 vaccine and all the antigens used in diagnostic tests for brucellosis. Difficulties in the production of Rev.1 vaccine have necessitated prolonged investigations. Some inquiries into the prevalence of brucellosis in goats confirmed the impression that the incidence of the disease continues to decline.

(ii) Diagnostic Laboratory

This year has seen the gradual establishment of a laboratory diagnostic service. Much yet remains to be done, particularly in forging a firm link between the laboratory and field services. During the last nine months, a start was made in this direction by taking over the Artificial Insemination Scheme and, thereby, obtaining the part-time use of one of the Inseminators and the departmental van. It was further agreed that the laboratory should be moved to the Civil Abattoir. This move should permit better contact and liaison with the Government Veterinary Surgeons and their field staff.

Future../..

Future prospects for staff and the purchase of equipment should be considerably improved under the Colonial Development Cooperation Five Year Plan which commences in April, 1965.

A certain amount of useful exploratory work has been undertaken, and the following diseases have been recognised for the first time here with a reasonable degree of certainty, namely:-

Cattle	Pigs
Mastitis S.agalactise	Swine Pox
" Alpha haemolytic strep.	Sarcoptic Mange
" Beta haemolytic staph	Iron deficiency
Ricketsial Conjunctivitis	
Coliform Infection (Calves)	

Poultry	Sheep and Goats
Coliform Infections	Parasitic Gastro Enteritis
Contagious Respiratory Disease	Coccidiosis
Infectious Bronchitis	Enterotoxaemia
Vitamin K. Deficiency	
Aspergillosis	Rabbits
Blackhead (Turkeys)	Salmonellosis
" (Chickens)	Myxomatosis(wild rabbits only)
	Sarcoptic Mange
	Pigeons
	Salmonellosis

Diagnostic Service

During the year 251 outbreaks or cases of diseases were investigated. Some notes are given below on those of most economic or general interest. Insufficient data was available to give a reliable account of diseases in farm livestock but the incidence of the more prevalent poultry diseases may be gauged roughly from the following table:-

Diseases	Outbreaks
Fowl Pox	17
Leucosis	18
Sinusitis	7
Fowl Paralysis	7
Fowl Typhoid	16
Ascarids	17
Coccidiosis	20
Vitamin A Deficiency	4
" B "	6

Mastitis (Bovine). A little information has been collected and the presence of S.Agalactise has been recognised. However, the supply of material is limited, mainly because cow keepers tend to treat their own animals rather than ask for veterinary advice.

Calf-hood mortality. This is reported to be very high, and from the descriptions heard and the occasional specimen available, B.coli infections appear to be the predominant cause. An attempt is being made to re-introduce the use of prophylactic serum.

Iron Deficiency in Piglets. A comparative split-litter trial at the Government Farm has shown conclusively the value of iron injections under local conditions. This line is being followed by the more progressive local pig keepers though, at present, these are very much in the minority.

Enterotaxaemia../..

Enterotaxaemia in Goats. This has been observed so far only in one herd and the results, following vaccination, were satisfactory. Here again, not very much information comes in from the livestock owners and its economic significance is doubtful either in goats or sheep.

Myxomatosis. This is believed to have appeared amongst the local wild rabbits during October, 1964. So far, it has shown no tendency to spread to the domestic rabbit population. As a precautionary measures, all Government-owned stock was vaccinated with Shope Fibroms vaccine.

Swine Fever. Very few outbreaks have been detected this year. The situation has coincided with the introduction of a live vaccine. 9007 vaccinations were carried out in Malta during 1964.

POULTRY DISEASES

Management: Faults in management, such as overcrowding, poor ventilation, bad lighting programmes, and forcing into lay too early are still common and, in the natural course of events, respiratory troubles, leucosis, ascarids, coccidia, cannibalism, etc. form part of the general disease complex. The last year has, however, seen a degree of improvement, partly as a result of increasing competition.

Leucosis: This continues to be one of the major sources of loss to the poultry industry. It is difficult to be certain how far egg-produced poultry vaccines may be incriminated. However, outbreaks of Leucosis appear to be relatively as prevalent in unvaccinated stock. Also, in those flocks, having heavy losses, there is nearly always a problem of overcrowding and inadequate isolation of young stock; the history often suggests a gradual build of infection from the time when the premises were first used intensively.

Fowl Paralysis: This disease is relatively uncommon and, again, is usually associated with faults in management.

Fowl Pox: Outbreaks are fairly common amongst unvaccinated stock though mortality is low. Intramuscular injections of streptomycin have proved useful in treating the more severely affected birds.

Fowl Typhoid: has made its appearance as a problem amongst flocks housed in batteries and on wire floors. Field experience suggests the house fly as the principal vector. This disease, as seen here, differs from the recognised picture in that the liver rarely shows the typical bronze discoloration but is usually enlarged, mottled and friable. Death appears to be rapid and only rarely is it possible to obtain a positive response to the rapid stained antigen test from the heart blood of dead birds. Furaxolidone has proved satisfactory in controlling losses.

Newcastle Disease: No cases of Newcastle Disease were detected during the year.

Infectious Bronchitis: The significance of this disease locally is still questionable. No typical outbreak of the respiratory form has yet been observed; but there was strong suspicion on some farms where a fall in egg production was associated with the laying of rough and deformed eggs.

Vitamin../..

Vitamin deficiencies: have been relatively uncommon and there seems to have been an improvement in the general standard of compound fodder manufacture.

Parasitic diseases: are usually only a problem in the less efficiently managed units. Deep litter systems of management have not proved very popular in Malta.

D. ARTIFICIAL INSEMINATION SCHEME

This scheme was brought under the Diagnostic Laboratory Service during May of this year at which time the number of services and conception rate had fallen to a very low level. There are now signs of a definite improvement in both respects which reflect credit on the operating staff. However, with a dairy population of 4,000 cows, there is still a long way to go. The service will be put on a seven-day week basis on 1st January, 1965, and further progress should be expected. Statistics for the year are:-

Month	Total Services	Repeat Services
Jan - April	18	11
May	6	4
June	4	-
July	16	2
August	11	-
September	13	3
October	35	9
November	19	4
December	33	7
	155	40

Vaccine Production

A limited amount of "wet" poultry vaccine was produced by egg cultivation during the winter months for local issue. On the whole, the demand for these vaccines has been disappointing, though this is in part due to our present freedom from Newcastle Disease. Issues commenced in March and statistics for the rest of the year were:-

Vaccine	Doses
Newcastle Disease vaccine(Drinking water)	43,000
Fowl Pox vaccine	106,000
Pigeon Pox Vaccine	32,000
	181,000

In addition, 300,000 doses of Komarov Newcastle Vaccine were prepared and kept in stock for emergencies. This is a 'hot' strain of the virus which would not normally be used except in the presence of an actual disease risk.

General Remarks

This assignment is still very much in its formative stages. So far, poultry diseases have comprised the greater part of the work, but the move to the Civil Abattoir should make for better liaison with the local Veterinary Services and for a greater diversity of problems to be tackled.

The poultry industry continues to expand and has become much more competitive. Three major projects have started during the year, including local hatcheries, broiler units and a processing plant all of which are new to Malta.

The general../..

The general standard of pig keeping continues to be on a very low level but there are now signs of a change-over to more modern methods of production. One new farm has already been established and a good start has been made on a self-contained 200 sow breeding and fattening unit working in conjunction with the Malta Bacon Factory. Once these ventures prove successful others will certainly follow and the whole pattern of the industry may change quite rapidly. The use of a live vaccine against Swine Fever appears to have been successful in controlling one of the major sources of loss to the industry.

Amongst cattle, the progress of the Artificial Insemination Scheme should eventually cause an improvement in the national herd; especially if the present plans to import deep-frozen semen from proven bulls mature. However, this must be combined with a much better control of calfhood mortality if we are to obviate the need for periodical imports of breeding heifers. Possibly the use of better quality and more expensive imported semen may help towards making local dairy farmers more conscious of these losses and more interested in controlling them.

CHAPTER V

The Horticulture Division

1. Advisory Work

Advice and practical assistance was given to growers on various subjects such as siting, manufacture and erection of glasshouses and polythene structures as well as heating and water system installation, and culture of crops- tomatoes, cucumbers, carnations, mushrooms, etc.

2. Investigational Work

(i) Cambridge Alumbrite Glasshouse

This house was used to carry out a statistically randonised and applicated tomato grafting experiment - comparison of grafted Eurocross A Plants (on root-stock KN) with ungrafted Euro A,B and BB - in order to find out differences in growth, yield and resistance to disease between grafted and ungrafted plants.

No outbreaks of soil or seedborne diseases were noticed. The grafted Eurocross A plants gave the highest total yield and also a higher percentage of fruits in the select grades than Eurocross A ungrafted. Eurocross BB gave the highest percentage of fruit in the P and W and P and W X grades.

(ii) Cucumber House

This year this house was glazed and the heating pipes extended all along the eastern side of it.

Last season, the English Traditional Cucumber Bed was demonstrated but it did not give good results. Nine varieties of Cucumbers were planted and the trial indicated that Telegraph and Bittee gave the highest yields under heated conditions while Spottex was the best under cold conditions.

(iii) Polythene Lean-to

A Bell Pepper trial was carried out using the 'local' and the American 'Jackson Wonder' varieties.

The seedlings were pricked off into either 3½" pots or soil blocks and planting distances, wider than normal and ranging from 22" square to 22" x 26" were adopted.

Results seemed to indicate that pricking off into pots gave a higher yield. However, much depends on the making of the soil blocks e.g. composition of compost and its consistency.

The wider../..

The wider planting distances did not improve yield at all. The fruit shape of both varieties was not that required for export.

(iv) Mushrooms

A trial was conducted using cow and horse manure, different types of spawn and casing layers. The set up was very artificial but some results were obtained. Horse manure gave a better yield than cow manure while dry manure spawn gave the best results. Grain spawn alone was not successful probably due to the light rate of application.

Moist manure spawn is not to be recommended in Malta. Cypsum, incorporated in the casing soil at the rate of 25 lbs. per ton, certainly depressed the yield.

(v) Geraniums

Scented Pelargonium cuttings were planted at Tal-Kmand Nursery. The aim was to have enough plants to supply the Agricultural Chemist with a supply of leaves for oil distillation with a view to commercial production.

Cuttings of ordinary Geraniums were taken and the rooted cuttings planted round different parts of the Government Farm, this being part of the future "Plant Geranium" campaign in an endeavour to keep Malta in bloom.

3. Outdoor trials

i) California Wonder Bell Pepper

Previous sowings of this variety had indicated that percentage germination was poor and, therefore, some seeds were soaked for 72 hours prior to sowing. However, this had a slightly adverse effect on germination.

ii)../..

ii) "Pelati" Tomato Varieties

Two formal Latin Square variety trials, one at Ghammieri and the other at Villa Rundle in Gozo were sown last summer with "pelati" tomato varieties "John Romano", "Baresi" and "Gaudiano 18/p". In both trials the local ribbed tomato was included as a standard of comparison for yield results.

The results showed that "John Romano" is not worth considering as a variety for local cultivation. The other two gave total yields of more or less the order of the local ribbed, "Baresi", however, showing a tendency to be poorer than and'Gaudiano 18/P better than the local variety.

iii) Pomodoro Tipo San Marzano

This variety is reputed to have been bred with the specific purpose of giving good yields under dry conditions. However, this assertion was not corroborated by the trial. In actual fact, irrigation doubled the weight of marketable fruit and decreased the incidence of Blossom End Rot.

4. New Projects

i) Tal-Kmand Nursery

Funds from the "Freedom from Hunger Campaign" have been made available for the enlargement of the existing nursery and its partial conversion to the cultivation of carob trees.

Some 2,000 young carob seedlings have been planted and the newly acquired fields have been prepared to receive some 4,000 stone fruit seedlings.

Two../..

Two trainees will soon be selected in order to proceed to the United Kingdom for a year's training in nursery work.

ii) Buskett New Fruit Tree Grounds

Fields have been manured and prepared for planting. Early and late varieties of plums, pears, peaches and apricots will be grown.

5. Staff

After successfully completing his training in the United Kingdom, Mr P.Calamatta, Agricultural Officer, joined this Division.

CHAPTER VI

Public Gardens, Plantations and Afforestations Sections

a) San Anton Public Gardens

During the year ornamental trees, shrubs and creepers were planted in large numbers.

As ever, these gardens attracted attention especially during the flowering season.

Visitors showed their appreciation of the floral designs exhibited in these gardens and whilst they ate the fruit grown in them, for fruit is sold direct to the public frequently at these gardens, they enjoyed to the full the gorgeous colours of the flowers and the fragrance which fills the place.

b) Buskett Gardens

These are historic gardens and date back to the times of the Order of St.John of Jerusalem.

The Agrarian Society use these grounds to hold their annual Agricultural Show called 'L-Imnarja' which is a tradition for thousands farmers, breeders and others to attend.

The trees in these gardens, which suffered so much when natural springs were deviated for drinking purposes are recuperating fast now that other means to water them have been devised.

c) Blata l-Bajda Garden

This site has been considerably improved and many additional trees have been planted. The boundaries of the flower plots have been reset. Shrubs have been introduced in large numbers and annuals are a constant feature.

Water pipes and hydrants have been installed, electricity lamp posts were placed at several points and the paths were asphalted.

A playing field for children is also provided. The necessary equipment was donated by Messrs Shell Company (Malta) Ltd.

d) Other Public Gardens, Open Spaces, Traffic Islands and Strips

The area, covered by traffic islands and road strips is increasing fast with the construction of new roads and the modernizing of old ones. This notwithstanding, these plots are well kept but annuals are giving way to perennials in order to economize on labour costs.

The paths in some public gardens leave much to be desired but these are not the Department's responsibility. It, is however, becoming clear that the Department had better assume responsibility for these too if their state is to be improved.

e) Nurseries

The Nurseries are the principal source of supply of trees, shrubs and flowers in pots not only to meet the requirements for public roads, gardens, roundabouts, etc but also to provide a source of supply to the public who can get what it requires at reasonable prices.

However, the requirements of fairly-large trees have become so great that these sources of supply are inadequate and have to be supplemented by imports from Sicily.

f) Plantations../..

f) Plantations

Many roads and streets are being planted with rows of trees and the number of trees thus planted has now risen to about 45,000. This process is continuing and a great effort is being made to give a "green" look to the Island.

The "Ficus Nitida" tree now predominates. There is no question that it is a fine tree and that it is ideal for Malta. However, other trees, such as the Acacia, Robinia, Cercis, etc., are also being planted to give more variety to the avenues.

g) The Private Garden of San Anton and Verdala Palaces

These are His Excellency the Governor's private gardens. They are well kept and floral designs are quite numerous.

The Bermuda grass (Cynodon Dactylon) proved a success and its scope is being enlarged.

h) Afforestation

More trees were planted under the Afforestation Scheme and the number of trees has now exceeded 35,000. The Olea remains the predominant tree but the Aratonia is being given more importance than hitherto.

It has been found that the Ceratonia does reasonably well where the Olea remains relatively stunted.

i) Arbor Days

Arbor Days have become a yearly occurrence. Two such occasions were held during 1964. School children planted thousands of trees and promised to foster a love for trees. Hymns extolling their beauty were sung. Poems in praise of trees were written by teachers. These events are really a pleasure to watch and their popularity is increasing annually.

j) Independence Activities

Most auberges and palaces as well as many of the principal roads were decorated with flowers collected from the public nurseries.

Valletta was particularly attractive with its floral designs in which dahlias, Zinnias, tagetes were profusely used.

Plants in pots were displayed at vantage points and contributed their part in embellishing the city.

CHAPTER VII
The Marketing Division

1. General

The main activities of this Division are the following:-

i) The collection of statistical data regarding items of of agricultural interest.

ii) Supervision of the wholesale Pitkali Markets and the Co-operative Stalls.

iii) Inspection of agricultural produce at the Export and Import Inspection Sheds.

iv) Making recommendations to the Director of Industrial Development with a view to the issuing of licences for the import and export of agricultural produce.

v) Issuing permits in connection with the distribution of locally-milled wheat offals and pulverized manure.

vi) Watching over the controlled retail prices of fresh fruit, vegetables and meat.

2. Vegetables, Fruit and Cereals

i) Vegetables

a) Potatoes

Potatoes are grown in large quantities to meet the local demand and to provide a surplus for export.

No less than 4,000 tons of seed potatoes are imported annually chiefly the Arran Banner and Alpha varieties. Royal Craigs are imported in very small quantities and are meant as an early crop. Sowing is carried out between November and January. By the following April the tubers mature and the export season starts and drags on up to July.

In 1964, 9,086 tons 12 cwts of Spring potatoes were exported. Of this quantity 6,873 tons 15 cwts were sent to the United Kingdom, 1,922 tons 17 cwts to Holland, 75 tons to Belgium and 215 tons to West Germany.

The potatoes are exported in new jute bags but the Malta Union of Farmers despatched some consignments in 25 Kilo wooden boxes with the potatoes packed in peat moss. 2,394 boxes equivalent to 59.85 metric tons were exported.

b) Onions

Onions are exported in fairly large quantities. During the year 2,312 tons were exported, mainly to the United Kingdom.

The seed is almost wholly grown locally but a small quantity of foreign seed is invariably imported.

There are two varieties, one, the round pink type is grown for home consumption, the other, the circular flat topped type, is cultivated for export. The latter type is grown on relatively dry land, the former, mostly in irrigated parts of the Island.

c) Tomatoes

Tomatoes are an important item of agricultural interest. Progress in tomato growing has been continuous. Firstly, production was directed to satisfy the local market and render imports unnecessary. Secondly, a surplus was aimed at to feed the canning industries. Thirdly out-of-season tomatoes were grown for export as salad tomatoes.

During the year, 7,604 kilos of glasshouse tomatoes, valued at £4,555 and 119,489 kilos of tomato puree, valued at £10,257, were exported to the United Kingdom and other West

European../..

European Countries.

d) Other Vegetables

Hardly any fresh vegetables are imported. All local requirements are met from local production.

The principal vegetables grown are:- Artichokes,both Globe and Jerusalem, Broad Beans, Cabbages, Carrots,Cauliflowers, Cucumbers, Kohlrabi, Lettuces, Long and Vegetable Marrows, Peas and Pumpkins.

e) Fruit

Fruits, typical of the Mediterranean basin, are grown. The most important are:-
Apples, Cherry Plums, Figs, Melons (water), Melons (winter) Melons (sugar), Oranges, Lemons, Peaches and Strawberries.

The demand for fruit trees is so great that large quantities are imported from Italy, Tripoli and Israel.

iii) Cereals

Wheat, Barley, Meslin, Vetches, Forages, Broad Beans and Locust Beans are all grown in sizable quantities but imports remain the chief source of supply.

3. Marketing Centres

Agricultural produce is mainly channelled through Pitkali(wholesale) and Co-operative Societies.

There are in all 37 pitkaliji, (marketing stalls). Of these 4 are in Gozo. All pitkaliji, except a few, carry on business under the direct supervision of a Government Inspector appointed for the purpose.

4. Exports 1964

The following are the items exported in 1964 in order of value:-

a) Wine

The value of wine exported reached £299,600. This was the highest figure reached to-date.

As there is room for larger exports of wine, the cultivation of the vine is greatly encouraged.

b) Potatoes

The value of potatoes exported this year was £246,000. This is, by comparison with previous years, a small amount.

c) Cut flowers, etc.

The value of cut flowers, seeds and bulbs reached £195,000. Though this figure is high, it was lower than that for last year when £207,000 worth of flowers were exported.

d) Onions

The value of the exports of onions was £56,000. This is a normal amount.

e) Hides, skins, etc.

The value of exports of hides, skins, tallow, etc. was £44,900. The value of these items is constantly going down as local industries are now tanning a good part of the skins which were formerly exported.

f) Other../..

f) Other items

Tomato puree (£10,200) tomatoes (£4,500) and live animals (£3,000) were also exported.

5. Imports 1964

a) Fruit

Fruit is imported in large quantities, the chief items being Oranges, Lemons, Bananas, Apples, Cherries, Peaches, Nectarines, Pears and Plums. The total value was £513,104.

b) Eggs

Eggs are also imported in considerable quantities. 949,583 dozen eggs, valued at £103,159, were imported. This is much less than in 1963 when 1,248,320 dozen, valued at £167,408, were imported.

The importation of this article will decrease as local egg production gains ground.

c) Fodder

Fodder is imported in very heavy quantities. The value of imports was £1,393,110.

d) Chemicals etc.

Chemicals and fertilizers are imported in fairly large quantities. These imports were valued at £48,336.

e) Seed Potatoes

4,153 tons of Seed Potatoes valued at £101,000 were imported.

6. Licences

The importation of Agricultural products is made on the recommendation or otherwise of the Director of Agriculture to the Director of Trade.

7. Permits

Every Friday the Secretary of the Malta Millers Association gives the information regarding the wheat offals supply position for the ensuing week.

The available quantities are rationed to licensed retailers, registered breeders, manufacturers and co-operative societies.

8. Inspections

Agricultural Inspectors make regular inspections on retailers of fresh fruits and vegetables in various parts of the Island for the purpose of ensuring that the provisions of the Agricultural Produce (Marketing) Regulations 1952 are carried out. Butcher shops are likewise regularly visited to see that controlled prices of fresh pork and beef are observed.

9. Statistical data

Statistical information is collected, abstracted, analysed and interpreted. These statistical data help considerably in formulating a sound policy.

PLANT../..

CHAPTER VIII
PLANT PROTECTION DIVISION

1. General

The principal role of this Division is to provide a Pest Control Service to farmers and growers. For a time the 'Contract Spraying Service' functioned on a large scale but its purpose having been accomplished, steps were taken to reduce its size to actual requirements.

2. Insect Pests

(a) Tussock moth

Following the previous (1963) season's attacks on Plum and Apricot by the Tussock Moth (Orgyia trigotephras var. corsica stgr.) which was reported too late for effective control measures, adequate preparations were taken in hand this year. All organo-phosphate insecticides failed to give any control and the pest was finally checked by Dieldrin and Sevin, both at 0.1% a.i. Owing to the short interval available between application and harvest, the former chemical was sprayed only on non-fruit bearing trees, to prevent defoliation. Both chemicals gave a 99% kill.

(b) Cutworms

The heavy rain which was recorded during August, followed by the subsequent hot spell, produced a heavy infestation of Cutworms (Noctuidae) principally on the Autumn Potato Crop. The infestation was considerably augmented by immigration from North Africa and the onset was so sudden that several potato fields were completely deplenished overnight.

Among larvae collected in the field, were several obvious newcomers bearing a strong resemblance to those of Prodinia litura F. Breeding in the laboratory confirmed this identification. The numbers recorded were suggestive of mass migration rather than incidental importation.

Malathion sprays gave fair to mediocre results in control and fresh trials, both laboratory and field, are scheduled for early 1965, on emergence of the first adult brood.

(c) Cabbage White Butterflies

The damage to the potato crop by Cutworms coincided with a mass migration of Cabbage White Butterflies (Pieris brassicae L. and Pieris rapae L.) and several quarters connected the former effect to the latter cause.

At the../..

At the peak of the invasion period, fishermen on the South East coast of the Islands were disturbed by masses of adult butterflies coming from the sea.

The Cabbage and Cauliflower crops suffered no noticeable damage, being sprayed regularly, and heavy winds and rain squalls destroyed the bulk of the infestation.

(d) Potato Tuber Moth

Confirmatory tests for field control of the Potato Tuber Moth (Gronimoschena operculilla Lill) were held in April/May 1964. All chemicals were applied on to the foliage of the potato crop by motorised knapsack sprayers at 25 gallons to the acre. Dosage rates in the table have been converted to orthodox high-volume rates. Results were as follows:-

Chemicals	Formulation	% a.i.	No. of sprays	Pre-harvest interval	Tuber infestation
Malathion	50% E.C.	0.1	2	7 days	0.01%
D.D.T.	25% E.C.	0.75	1	21 days	0.02%
Dieldrin	50% W.P.	0.1	1	28 days	0.00%
Control					1.75%

(e) Wood Boring Insects

Investigations on "Cerambyx dux Fald".Capnodis tenebrionis L. and Zuezera pyrinia L. all serious pests of the apple and pear trees, were brought to a successful conclusion by confirmatory trials held during 1964. In addition, the complete life-history of the pest named has been studied and preliminary trials on its possible eradication have been initiated. Tests with two chemosterilants - M.A.P.C. and Apholate - have given encouraging results and two possible avenues of approach are contemplated.

(f) Mediterranean Fruit Fly

Infestation conditions during 1964 were average, but, owing to the mild Autumn, adults persisted up to November. The new 2-spray treatment for both M.F.F. and Scale Insects went into operational use this year after its 3-year experimental period.

(g) Miscellaneous../..

(g) Miscellaneous pests

No change was effected in any other control programme as far as insect pests were concerned.

3. Plant Disease

(a) Potato Blight

Occurrence of late Blight (Phythoptora infestans) on both Spring and Autumn potato crops was light to moderate. No damage was suffered by sprayed crops. The same good results were noticeable on the outdoor tomatoes.

(b) Downy Mildew of Onions

Confirmatory tests with Maneb 70% W.P. and Zineb 65% W.P. both at 0.2% gave satisfactory results for control of Downy Mildew of Onions (Peronopspra destructor). Both chemicals were recommended to farmers.

(c) Grape Diseases

As in previous seasons, incidence of both Downy Mildew (Plasmopara viticola), and Powdery mildew (Uncinula necator) was average. Both diseases were kept well under control, the former with Zineb and Copper sprays, the latter mainly with Sulphur. A large number of farmers is gradually going over to Wettable Sulphur formulation.

(d) Diseases of Glasshouse Tomatoes

The situation regarding control of Late Blight (Phythoephthora infestations) and Leaf Mould (Cladosporium fulrow) underwent a radical change during 1964. Prior to this year, growers thought that by increasing their spraying campaigns the diseases would be better controlled but they did not perform the normal hygiene and ventilation precautions. This took a heavy toll of the crop.

4. Advisory Work

Various topics were selected at Farmers' Meetings. Emphasis, however was made on "Safety precautions in handling Pesticides". "Control of Potato Tuber Moth in Field and Store" was also a frequent theme at these meetings.

Fields../..

Fields were visited by members of this Division and practical demonstrations were given to growers.

Tabulated recommendations for Pest and Disease Control were mimeographed and distributed to growers. A book entitled "Survey of Insect Pests of Crop Plants" was printed and a Maltese translation of a Booklet on Pests and Diseases of Glasshouse Tomatoes was made.

6. Phytosanitary Branch

During the year the following parcels were examined:

a) Imported consignments

Fruit	-	585,295 parcels
Vegetables	-	142,603 "
Ornamentals	-	7,605 "
		735,503

b) Exported consignments

Ware Potatoes	-	353,701 parcels
Onions	-	83,026 "
Fruit	-	53 "
Chrysanthemum cuttings		6,169 "
Carnation cuttings		607 "
Other Cuttings	-	488 "
Live plants	-	102 "
		444,146

7. Contract Spraying

The demands on the Pest Control Service of the Department continued to decline. Farmers have become increasingly less dependent on such a service they having bought the necessary spraying machines.

The following work was done:-

Crop	Pest Disease	Trees/Area
Olives	Weevils	20,168 trees
Tomatoes	Blight, Leaf Mould, various insects	44 tmiem
Ornamantals	Various	43 "
Vegetables	"	123 "
Potatoes	Blight, cutworms	1,055 "
Peaches	M.F.F., Leaf Curl	1,930 "
Citrus	M.F.F., Scales Lichens	19,127 "
Apples & Pears	Aphides, Codling Moth Wood Borers	8,538 trees
Vines	Mildews, Berry Moth	140 "

CHAPTER IX

GOVERNMENT FARMS AND STOCK STATIONS DIVISION

Introduction

The chief aims of farms and stock Stations include:-

i) To afford facilities to the Technical Officers of the Department to carry out research work in animal breeding crop husbandry and arboriculture.

ii) To serve as demonstrational centres to breeders, growers and floriculturists.

iii) To produce high quality breeding stock and good quality seeds and bulbs.

iv) To familiarize farmers with modern farming techniques and to encourage a greater use of agricultural machinery.

v) To help breeders and growers in the art of good management on which so much depends.

On the whole, response was adequate and progress was noticeable all round.

Section I - Animal Husbandry

Cattle

A cow herd, predominantly Friesian, was kept. The milk yield per cow was only 724.7 gallons. This is considerably less than that obtained last year which was 934 gallons per cow. The figure of 724 gallons is considered rather satisfactory than good as many herds in Malta have a higher average.

Caprines

The Saanen herd is mainly kept for the production of billy goats which are in great demand by local herdsmen for crossing purposes with the local breed.

Saanen Stud Services were made availabe.

Swine

Pig units are kept for the purpose of selling sows to breeders and for carrying out experiments with a view to improving on methods of management.

Outdoor and indoor breeding were maintained. There is a tendency for outdoor breeding to show better results. Farmers therefore are being advised to have piggeries with an open small yard so that pigs may go indoors or out at will.

Section II - Poultry including Rabbits

Hens

1,200 Pure Light Sussex pullets were crossed with Rhode Island Red cocks. Both pullets and cocks were imported from the United Kingdom.

These crossings are made with a view to hatching sex linked day-old chicks for sale to the backyard farmer.

The../..

The following table gives the production of chicks for the year:-

MONTH	CHICKS HATCHED
January	5,359
February	4,275
March	2,825
April	3,275
May	3,051
June	2,812
July	641
August	271
September	3,122

Turkeys

The flock kept was the Broad Breasted White. 150 old day poults were imported from the United Kingdom. Another 140 poults were hatched locally. From these, 100 breeding hens and 24 stags were selected for breeding purposes next year. During the year, 1,273 hatching eggs were sold.

Rabbits

The aim of keeping rabbits at the Government Farm is to encourage breeders to increase their rabbit population especially of the New Zealand White and the Flemish Giants breeds which have proved very successful under local conditions.

The rabbit cages have been enlarged in order better to house the increasing number of rabbits being kept at the Farm.

Sale of Rabbits from farms

	Bucks	Does
New Zealand	57	50
Flemish Giant	46	41

Section III - Horticulture

The main aims of this Section are:-

a) to grow fodder for livestock kept at the Farm;
b) to carry out trials;
c) to grow seedlings for sale to farmers.

Several trials were made with:-

a) Spring and Winter Potatoes
b) Tomatoes
c) Melons
d) Vegetable marrows
e) Cucumbers
f) French Beans
g) Bellpepper
h) Egg Plant
i) Brussel Sprouts
j) Carnations

The different results obtained were observed, analysed and interpreted for future action.

CHAPTER X
VITICULTURE & OENOLOGY DIVISION

Acting on the report drawn up by Prof.H.P.Olmo, the F.A.O. Viticulture Specialist, this Division embarked on a two-fold programme of activities, namely:-

(a) activities connected with the Buskett Grape and Wine Station set up in 1963.

(b) activities connected with the field improvement and expansion of viticulture.

Work at the Buskett Grape and Wine Station was mainly concentrated on experimentation in trellising, that is, on lifting, within the limits practicable under local conditions, the bunches from the ground. It is customary locally in the majority of cases to leave the fruit lying flat on the ground or to emabrk, in some cases, on a last-minute attempt at a laborious method of lifting the vine. The former system is to be condemned outright, since it favours the deterioration of the fruit either through rotting or sunscald, while the latter system, although not altogether condemnable, involves considerable labour and is normally carried out at too advanced a stage to be of benefit to the vine. Furthermore, both systems prevailing locally do not permit proper cultivation of the vine since it is impracticable under these conditions, to weed or spray effectively, apart from the defective aeration involved.

A system had, therefore, to be envisaged for Buskett which would allow mechanised ploughing, mechanised spraying and proper aeration especially in the maturation period of the bunch. Two forms of trellises were introduced, based both on angleiron bars cemented into ferro-concrete blocks, which, in their turn, were planted on a cement bed under soil level. In the "wine" section of the station, the "low" trellis system i.e. height not more than 3 ft.was introduced, while in the "table" section, the "overhead" trellis, i.e. height not exceeding 6 ft. was experimented with. In both cases, it was still premature to assess results although it was probable that the "overhead" trellis might not yield the expected results in the open field in view of wind damage, principally during April/May.

As regards field improvement and expansion of viticulture, two schemes were taken in hand. One involves the setting-up of a series of sub-stations, the so-called experimental vineyards, on the Buskett model, while the other aims at utilising the land adjoining rubble walls for the cultivation of the vine.

As regards../..

As regards sub-stations, six by one tumolo each were planted of which three in Malta i.e. Benghajsa, Siggiewi and Miżdep, and three in Gozo, while, as regards rubble walls, twenty farms in both Malta and Gozo were planted with vines. Both schemes are intended to operate for a period of four years, so that at the end of this period, Malta and Gozo should have 12 sub-stations each and 80 grape farmers would be benefiting from the rubble wall scheme.

In the field of oenology, the progress in export of wines was maintained and improved upon. It is anticipated that at this pace, wine exports will eventually constitute one of the major items of exports obtained through the processing of local agricultural products.

The second Wine Testing Session was also held at the Buskett Grape and Wine Station, to which the main representatives of the vintners' group were invited. It proved again to be a great success.

CHAPTER XI
LAND AND WATER USE DIVISION

1. General Division

This Division is divided into three main Sections, namely (1) Land Use, (2) Water Use and (3) Animal Nutrition.

2. Land Use Section

(a) Advisory

Close association was maintained with the Horticultural and Extension Service Divisions as regards soil analysis. One of the problems which was studied during the year was the salt accumulation in glasshouses where tap water was used for irrigation. It appears that over the years salt accumulation might reach levels which could depress yield significantly.

(b) Research

Fertilizer Experiments

Fertilizer experiments on potatoes were continued during the earlier part of the year. The data recorded and averaged from the three repeats were as follows:-

Treatments	Qantar/Tomna	%
(i) Control	38.7	100
(ii) 4 cwts Sulphate of Ammonia/Tomna	43.9	114
(iii) 7 cwts of complete fertilizer (12.12.17.2.) given in one doze	44.8	116
(iv) Same as (iii) given in three doses	44.0	114

It should be emphasized that a good dose of farmyard manure (15 bags/tomna) was applied to all plots. Thus the artificial fertilizers were additional to the farmyard manure.

(c) Legal Aspects

i) Agricultural land registration

The following comparative statement shows the number of land transfers effected during the period 1960/64:-

Number../..

	1960	1961	1962	1963	1964
Number of Land Transfers	610	513	578	694	437
Number of farmers who transferred bequeathed or sold their lands	526	444	498	632	379
Number of farmers who received, inherited or purchased lands	572	476	536	687	429

Transfers of land are the result of various causes such as death , emigration, abandonment of land for more remunerative work, infirmity, and erection of buildings on agricultural land.

ii) Fertile Soil Preservation

Comparative figures for building notices for the removal of soil from i) building sites, and cubic yards of soil removed from ii) private and from iii) Government sources are given below:-

	1962	1963	1964
i) Building notices	586	554	456
ii) Cubic yards of soil removed from private sources	42,360	58,893	44,038
iii) Cubic yards of soil removed from Government sources	84,530	50,320	62,860

3. Water Use

i) Mulching with Black Polythene

Lectures were delivered to farmers on the use of black polythene as a mulching material. These lectures were illustrated with slides and thus farmers could follow easily the salient points brought home to them.

Many farmers have now adopted the mulching technique in growing strawberries and they are finding this to be very useful in eliminating their weed removing work.

ii) The Sewage Purification Scheme

This scheme was studied further during the year and assistance was given to Prof.Popel, the W.H.O.expert who visited Malta in October/November in connection with the Project.

Among../..

Among the data collected for the proposed project was the conductivity of sewage effluent in various parts of the Island at hourly intervals. It would appear that the conductivity levels reach a maximum at 9 o'clock in the morning when the largest volume of human urine finds its way into the sewers

iii) F.A.O. Meeting in Salonica

In June, the Agricultural Chemist left Malta for Greece to attend the first session of the Working Party of the European Commission held in Salonica. Topics discussed included Water Legislation in Europe, Irrigation in European Agriculture, Economic Aspects and Administrative and Organisational problems involved in the implimentation of Irrigation Projects.

On behalf of the Government of Malta, the Agricultural Chemist extended an invitation to hold the next session of the Working Party in Malta. This invitation was accepted with acclamation.

ANIMAL NUTRITION

i) Advisory

The Agricultural Chemist took part in several farmers' meetings organised by the Extension Service Division and lectured on nutrition problems and balanced rations.

ii) Barley/Beef Experiment

The purpose of this experiment was to compare a ration based mainly on barley with the local traditional ration used in the fattening of beef cattle. Research abroad has provided some evidence showing that such a barley ration could, under certain conditions, be the most economic proposition for fattening beef cattle.

Bran is traditionally used in many parts of Malta for the first 12 days of the 3-month fattening period followed by a ration made up of Beans, Cotton Seed Cake and Carobs.

Traditional ration for the first 12 days

Item	%	Protein equivalent	Starch equivalent	Cost/qantar
Bran	100	9.9	42.6	18 shgs.

Traditional../..

Traditional ration for period 12th May to finish

Item	%	Protein equivalent	Starch equivalent	Cost/qtr.
Beans	45	8.87	29.60	22.5
Carobs	15	0.41	10.80	5.7
C.S.C.	20	3.46	8.32	8.4
Sulla	20	0.73	2.60	7.2
Ration	100	13.47	51.32	43.8 shgs

Barley Beef Ration

Item	%	Protein equivalent	Starch equivalent	Cost/Qtr.
Barley	77	5.62	55.00	31.95
Bran	15½	1.54	6.59	2.79
Pro CO	7½	3.75	4.51	6.11
Ration	100	10.91	66.10	40.85 shgs

Combining the two traditional rations, the cost works out at $\frac{(43.8 \times 6) + 18sh}{7}$ = 40.11 shgs/qantar.

iii) Legal

A Bill, making provision for the manufacture and sale of animal feeding stuffs and other matters incidental thereto, was published.

CHAPTER XII

THE GOZO DIVISION

1. Introduction

Gozo is predominantly agricultural and some 75% of the population make their living out of the soil.

Gozo has a ready market in Malta and the bulk of agricultural products grown there, are regularly shipped to Malta.

2. Animal Husbandry

T.B. Testing continued and reactors quickly put to sleep.

Vaccination of poultry against Newcastle Disease and Fowl Pox and of pigs against Swine Fever and Erysipelas was carried out regularly.

Stud services were made available to breeders at nominal fees and advice was given free of charge.

3. Horticulture

The policy to expand horticultural activities was vigorously sustained. Several experiments with a variety of vegetables and flowers were made and observations recorded. Techniques which produced good results were taught to growers who were encouraged to carry them out for themselves and see the advantages over the traditional methods hitherto used.

Glasshouses built with Government financial assistance, were well kept and out-of-season luxury crops fetched remunerative prices.

4. Plant Protection

The following treatments were carried out on privately-owned farms and orchards as well as on public plantations etc. by trained operatives.

i) Trees

About 1,413 citrus trees were treated against Iceria, Scale Insects, Aphides and Mediterranean Fruit Fly.

About 2,500 ornamental trees and decorative plants were treated against Alphids, Iceria and other diseases and pests.

About 750 fruit trees were also treated against the Codling Moth etc.

ii) Crops../..

ii) Crops

Some 83 tmien of vines were treated against Powdery Mildew, etc.

About 110 tmien of potatoes were treated against Blight.

5. Public Plantations

With a view to further embellishing the Island, more trees were planted. These included the Ficus, Tamarix, Silanthus, Oleander, Morus, Jacaranda, Solinus, Pirius, Olives and Ceratonia.

The total number of trees planted or replaced were:-

Trees added	-	923	
Trees replaced	-	698	
Shrubs added	-	1179	
Shrubs replaced	-	678	2478 plantings

6. Public Nurseries

i) Victoria

Experiments were carried out with Bougainvillea (Magnifica Tralei, Lateritra, Salvatore Allegra, Tarley's Special), Rose Bushes (Rouge Meillard, Baccora Gloria di Roma, Texas Centinnial) Chysurthemum (Bronze Mayford Perfection, Primrose, Red Rose, Fred Shorsmith, Golden, Balcombe, Yellow Belona) Carnations (Crowley Linds, Florence, Dazzlu, Arthu, Carry).

ii) Kercem and Tad-Dawwara Ornamental Nurseries

These are the main propagating nurseries and it is from them that most trees, shrubs and flowers have to come to plant in the public gardens, roads and roundabouts.

At tad-Dawwara a 'Mist Propagation House' has been built. It has proved a great success and in the future larger ones will be constructed.

iii) Xewkija Fruit Nursery

A very large collection of fruit trees has been planted at this nursery. Scions from mother plants serve to graft thousands of wild stock for seedling propagation.

The collection comprises:

Plums, Apples, Pomegranates, Peaches, Apricots, Kaki, Nectarines, Cherries, Pears and Quinces.

This../..

This Nursery was established to serve as a place for practical demonstration to growers. Here they are instructed in modern fruit cultivation techniques.

7. Viticulture and Oenology

Viticulture is progressing by leaps and bounds. The area under vine cultivation increases yearly and some 19,000 barrels of wine were produced. The bulk of this wine is shipped to Malta.

An experimental vineyard was established in March on lands situated at Xewkija. Twenty-two varieties of grapes have been planted and the performance of each variety will be closely observed.

8. Afforestations

Dumping of soil continued on waste land with a view to afforesting such sites.

The following lands were reclaimed during 1964:-

a) At Tal-Ggantija - where 168 olives and 46 other kinds, including oleanders and carobs were planted;

b) At Chambray - which received 292 trees made up of olives, carobs, araucaria and almonds.

9. Livestock Centre

The main purpose of this farm is to provide stud services and to make available pure stock for eventual distribution to breeders.

202 cows, 127 sows, 86 goats and 373 rabbits were served at this centre.

10. Financial Assistance to Farmers

Grants were made and loans were advanced for the erection of glasshouses and poultry units.

Tomatoes were exported in fairly large quantities and eggs started to be exported too. These exports are the result of the financial assistance that growers and breeders are constantly receiving.

11. Extension Service

This service has given very satisfactory results and it is bound to be considerably enlarged in the future.

Extension Service Officers paid frequent visits to farmers and gave them advice and invited them to call at the various experimental stations being run by the Agricultural

Department../..

Department in order to see for themselves the advantages of employing modern techniques rather than continue to pursue their traditional ways.

12. Annual Agricultural Show

On 15th August the Annual Agricultural Show was held. Exhibits totalled 2,321 and consisted of equines, bovines, caprines, swines, rabbits, fowl, birds, fruit, vegetables, cereals and agricultural implements.

Attendance was large and many farmers and breeders from Malta crossed to Gozo to see the exhibits.

The Department of Agriculture put up a number of educational stands to further improve the general outlook of the Show.

13. Fertile Soil Ordinance 1935

The following data, relating to the Ordinance, was collected:-

Notices of soil received	-	66
Inspections carried out	-	161
Reports of removal of soil	-	69

Fertile soil removed by private persons 6410 cub.yards
Fertile soil removed by Public Works Dept.15,860 cub.yards

Fertile soil, removed from prospective building sites, was utilized to reclaim waste land thus minimising somewhat the effects of the encroachments on arable land by private buildings, public works, etc.

14. Arbor Days

Arbor Days were held at Sannat, at San Lawrenz and at Xaghra.

The Minister of Agriculture, Power and Communications was present on all occasions.

These Arbor Days are thought to be most necessary and effective in stamping out vandalism and in fostering in the children and youths a love for trees.

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CHAPTER XIII
THE CO-OPERATIVE SOCIETY DIVISION

The Co-operative Society Division is entrusted with the registration and supervision of co-operative societies as required by the Co-operative Societies Ordinance of 1946. Direct supervision is continually exercised with a view to ascertaining that registered societies are managed in conformity with the Ordinance and the Regulations.

Progress in the auditing of accounts has been maintained and there remained only one society to be dealt with. The liquidation of 4 societies is still being actively proceeded with. Liquidation proceedings are, however, lengthy and drag on for years.

With a view to bringing Co-operative legislation up-to-date, the Ordinance and the Regulations issued thereunder are being examined by a committee, made up of officials of the Department with a wide experience of Co-operative matters and of representatives of the Co-operative Societies fully competent to undertake the work assigned to them.

A healthier atmosphere in the Co-operative field is apparent and this is reflected in the greater number of applications by important groups for registration as Co-operative Societies.

The Co-operative Societies engaged in marketing agricultural products, were the following:

1	established at	B'Kara
1	" "	Marsa
1	" "	Rabat
1	" "	Zebbug
1	" "	Siggiewi
1	" "	Valletta

It is estimated that about 23% of the total sales of Agricultural products are made through these Societies.

The../..

CHAPTER XIV
THE FISHERIES DIVISION

1. General

The Fisheries Division, which was amalgamated with the Department of Agriculture in 1963, has done well and has played its important role in the structure of the Department of Agriculture and Fisheries.

The two most important developments during 1964 were the initiation of the "tuna long line" technique and the commissioning of a number of medium-sized craft. Had it not been for these two welcome factors this year's total landings would have lagged far behind those of last year because of the severe wintry conditions that occurred, especially during June, when the lampara fisheries are at their best, and throughout the latter part of August which is the peak period for early 'lampuki'.

2. The Catch

The catch was lower than that for 1963 by 183,024 rtal which is quite relevant, but it should be borne in mind that 1963 was a record year for fish catching and 1964 in fact compares favourably with the previous ten years.

3. Future Expansion

It is anticipated that, in the course of next year the fishing fleet will receive the addition of a number of fairly large boats - 32 to 52 feet - which could stand the rough seas much better than smaller ones and thus the number of fishing days would be increased. These additional days at sea should increase the catch appreciably.

4. Loans and Grants

The sum of £11,021 was advanced in the form of loans and grants to fishermen. This sum was expended as follows:-

	Loans	Grant	Total
i) Construction of Craft	£4,597	£2,554	£7,151
ii) Replacement of Engines	-	1,694	1,694
iii) Fishing equipment	1,865	311	2,176
	£6,462	£4,559	£11,021

5. International Contacts

An eight-week study tour for the Technical Assistant (Gear) of the Division was arranged by the Israeli Government.

This officer submitted a technical paper on the "Use../..

"Use of knotless webbing as a method of improving the Mediterranean Trawlnet". It was included in the archives of the General Fisheries Council of the Mediterranean.

Dr.J.M.L. Lythgse of the Vision Research Unit of the Department of Industrial and Scientific Research of the United Kingdom paid a visit to discuss the possibility of Malta being made a field research centre for use by Commonwealth Scientists.

The Hon. Al Haj Tewa, Minister of Lands Settlement and Water Development and the Hon. Saleh Saadalla', Minister of Agriculture and Fisheries, called here to examine what was being done with a view to introducing improvements in their country.

Other personalities interested in the fishing industry who visited the Island were Mr Valentine Hinds, Chief Fisheries Officer, Aden, Mr R.Hollinmam, an F.A.O. Special Fund Representative and Dr.Peter Dohrn, the Director of the Stazione Zoologica of Naples.

6. Research

Dr.Peter Dohrn together with Mr (now Professor) H.Micallef of the Royal University of Malta and Mr J.Barbara, the Vocational Officer of the Fisheries Division attended a meeting of the Mediterranean Association for Marine Biology and Oceanography. Prof.Petit, the President of the Association, expressed the hope that Malta would become a centre for marine research in the Mediterranean.

A British Team of Scientists, composed of Dr.A.Dorey, Dr.C.C.Hemming and Dr.R.Baddeley conducted underwater experiments which revealed that just under the surface of the sea white net was the most visible. Next came the orange, followed by the green and finally, the brown. At a depth of 100 feet, the visibility order was established as follows: white,green, brown, orange and slate blue.

7. Marketing

All fish caught is auctioned by Pitkali (Middlemen) controlled by Government Fisheries Officers. This system ensures fishermen immediate payment for their catch.

Efforts are being made to encourage fishmongers to sell fish at different localities all over the Island but this is proving difficult since fishmongers prefer to dispose of their fish at the nearest point to the fish markets.

8. Fishing../..

8. Fishing equipment supply service

Equipment was imported to meet the usual demands.

A major achievement in this line however was made by the large-scale introduction of polythene twine, which has replaced the conventional sisal rope to the extent of 50%. One of the main factors in favour of polythene is that whilst the sisal rope is hardly usable after the kannizzati season, as it practically withers away after each season, polythene will last for many seasons.

Further the toughness of this material has made it a favourite for other fisheries and it has already been used with success as headline for trammel and gilling nets, besides for the novel "tuna long lines".

Experiments are also in progress to introduce polythene in the trawl fishery with the object of cutting down the cost of the canapa trawl net, which is the most expendable item in the trawl fishing.

9. Vocational Training and Propaganda

The Vocational Training Officer undertook the training of fishermen and their sons in the use of deck equipment.

Dissemination of the latest developments in the industry continued throughout the year by means of the Departmental publication 'Is-Sajd' which is distributed free to all fishermen.

10. Capital works

A major item was the completion of a 200 feet pier at Birzebbugia together with a protective sea-wall and a dry berthing area which provides a safe anchorage and other conveniences for the vessels making use of the bay.

Another important work was the construction of a 110 foot seawall and the surfacing of the resultant enclosed area along the second biggest slipway at Marsaxlokk. This work has now made it possible for medium - sized craft to dryberth and to manoeuvre sideways so as not to encumber the slipway itself.

A concrete berthing ledge was also constructed at Wied iż-Żurrieq at the part known as "id-Dukkiena".

Minor../..

Minor works of realignment of slipway gradients, construction of protective arms, extension of slipways, construction of hauling ramps, dredging of slipway approaches, mooring and berthing facilities and installation of hauling winches and cranes never stopped during the year. Practically all fishing centres benefited in one way or another.

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Table 1

Weights and Measures

Maltese	British	Metric
1. Weights		
1 uqija	0.93 oz.	0.03 kg.
1 ratal	1.75 lbs.	0.79 kg.
1 wizna	8.75 lbs.	3.97 kg.
1 qantar	175.00 lbs.	79.38 kg.
1280 rtal	2240.00 lbs.	1016.00 kg.
2. Measures of Capacity		
1 kartoċċ	1.00 quart	1.14 litres
1 kwarta	1.19 gallons	5.40 "
1 garra	2.38 "	10.80 "
1 tomna	4.00 "	18.18 "
1 barmil	9.50 "	43.19 "
1 salma	64.00 "	290.88 "
3. Measures of Length		
1 pulzier	0.86 ins.	21.83 mm
1 xiber (12 pulzieri)	10.31 "	26.19 cm
1 qasba (8 t'xbar)	2.29 yds.	2.10 m
4. Measures of Area		
1 qasba kwadra	5.25 sq.yds.	4.39 sq.metres
1 kejla	22.41 "	18.74 "
1 siegh (10 kejliet)	224.10 "	187.35 "
1 tomna (6 sighan)	0.28 acres	0.11 hectares
1 wejba (4 tmien)	1.11 "	0.45 "
1 modd (4 wejbiet)	4.44 "	1.80 "
5. Measures of Volume		
1 xiber kubu	0.63 cu.ft.	17.97 dm^3
1 qasba kuba	12.04 cu.yds.	9.20 "

Note:- An acre is equivalent to 3.6 tmien
A tomna is a square with sides 110 ft.long
A hectare is equivalent to i) 9.1 tmien
ii) 2.471 acres

Table 2

i) Farm Population 1955/64

	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1962-63	1963-64
Whole-time farmers	7,493	7,813	8,100	7,527	7,401	7,330	6,858	6,737
Part-time farmers	9,749	9,588	8,946	9,184	8,813	8,815	8,751	9,124
Farm population not engaged in farming	21,452	20,471	20,669	20,456	20,489	20,175	21,001	20,411
Children	20,234	20,041	19,639	19,034	18,190	17,191	15,779	14,741
	58,928	57,913	57,354	56,201	54,973	53,511	52,389	51,013

ii) Area

Malta	...	94,870 square miles	or 60,717 acres
Gozo	...	25,899 " "	" 16,575 "
Comino	...	1,075 " "	" 688 "
		121.844 square miles	or 77,980 acres

Table 2 (contd.)

iii) Land Distribution 1955/64

Year	1955	1956	1957	1958	1959	1960	1961	1963	1964
	Tmien	Tmien	Tmien	Tmien	Tmien	Tmien	Tmien	Tmien	Tmien
MALTA									
Agricultural Land Dry	120,250	119,137	116,806	114,380	111,684	107,980	105,543	100,687	99,613
Irrigated	6,468	6,266	6,509	6,324	5,775	5,528	5,470	5,585	5,287
Waste	21,451	20,495	19,770	19,849	19,268	19,511	18,860	18,064	17,712
Total	148,169	145,898	143,085	140,553	136,727	133,019	129,873	124,336	122,612
GOZO									
Agricultural Land Dry	32,698	31,030	31,972	30,691	29,477	29,121	27,866	27,642	26,626
Irrigated	1,084	993	924	948	765	741	698	624	560
Waste	2,203	2,188	2,005	1,923	1,794	1,845	1,757	1,953	2,037
Total	35,985	34,211	34,901	33,562	32,036	31,707	30,321	30,219	29,223
TOTAL MALTA AND GOZO	184,154	180,109	177,986	174,115	168,763	164,726	160,194	154,556	151,835

Table 3

GRANTS AND LOANS SCHEME

Grants - 1959/60 - 1963/64

	1959/60	1960/61	1961/62	1962/63	1963/64
	£	£	£	£	£
Glasshouses	-	2,593	2,073	2,510	7,335
Poultry Units	-	1,856	2,906	4,013	7,898
Pig Units	-	-	-	-	-
Machinery	320	8,655	3,418	2,149	2,185
	320	13,104	8,397	8,672	17,418

Loans 1959/60 - 1963/64

Glasshouses	-	8,932	7,272	8,572	11,992
Poultry Units	-	7,436	11,788	14,479	16,461
Pig Units	-	-	800	3,700	-
Machinery	18,918	23,418	16,255	6,361	4,440
	18,918	39,786	36,115	33,112	32,893

SEED POTATOES IMPORTED FROM 13th NOVEMBER to 31st DECEMBER, 1964

DATE	NAME OF SHIP	ALPHA (DUTCH)	A.BANNER N.IRELAND	ALPHA N.IRELAND	A.BANNER EIRE	ALPHA EIRE	CRAIG ROYAL EIRE	ALPHA DENMARK	CRAIG ROYAL N.IRELAND
13.11.64	S.S. ANTLANTIC	250 tons							
18.11.64	S.S. GALCHOS	50 tons							
19.11.64	S.S. INGRID								
	GOSTHON		160 tons						
	"		270 tons						
	"			1 ton					
	"		160 tons						
	"		160 tons						
23.11.64	S.S. MAGNE				350 tons	350 tons	50 tons		
24.11.64	S.S. NESTOR	50 tons							
24.11.64	S.S. VICKINGLAND							100 tons	
	"							200 tons	
7.12.64	S.S. BLUE SEA		130 tons						
	"		92 tons 19cwt.						
	"		140 tons						
	"		140 tons						50 tons
10.12.64	S.S. CAGLIARI	250 tons							
	"	50 tons							
	"	50 tons							
12.12.64	S.S. VASULAND							100 tons	
	S.S. GIENDA	50 tons							
24.12.64	S.S.FREISIAN BURG	50 tons							
28.12.64	S.S. MODE				250 tons				
30.12.64	S.S. FAIRWAY				150 tons				
	"				150 tons				
		800 tons	1252 tons 19 cwt.	1 ton	1250 tons	350 tons	50 tons	400 tons	50 tons

RECAPITULATION

Alpha (Dutch	800 tons	
Arran Banner (N. Ireland)	1252 tons	19 cwts.
Alpha (N. Ireland)	1 ton	
Arran Banner (Eire)	1250 tons	
Alpha (Eire)	350 tons	
Craigs Royal (Eire)	50 tons	
Alpha (Denmark)	400 tons	
Craig Royal (N. Ireland)	50 tons	4153 tons 19 cwts

DATE	DESTINATION	QUANTITY TONS.	CWTS.	QRS.	DATE	DESTINATION	QUANTITY TONS.	CWTS.	QRS.	DATE	DESTINATION	QUANTITY TONS.	CWTS.	QRS.	DATE	DESTINATION	QUANTITY TONS.	CWTS.	QRS.
8.4.61	London	287.	9.	-	5.4.62	L verpool	24.	10.	-	6.4.63	London	16.	8.	2.	26.3.64	London	5.	10.	-.
11.4.61	Liverpool	139.	-.	-.	8.4.62	London	123.	15.	2	22.4.63	London	288.	10.	0.	2.4.64	London	30.	-	-.
14.4.61	Leith	500.	-.	-.	17.4.62	London	146.	13.	-	23,4,63	Liverpool	230.	4.	2.	8.4.64	London	13.	-	2
17.4.61	London	169.	-.	2.	16.4.62	Rotterdam	1.	-.	-	24.4.63	Rotterdam/Leith	155.	-.	-.	14.4.64	Liverpool	57.	9.	-.
19.4.61	Glasgow	800.	-.	-.	18.4.62	London	76.	13.	-	24.4.63	London	101.	-.	-.	17.4.64	Leeds	532.	10.	-.
20.4.61	Glasgow	662.	17.	-	19.4.62	Liverpool	173.	15.	-	30.4.63	London	628.	5.	2.	23.4.64	United Kingdom	738.	2.	-.
22.4.61	United Kingdom	400.	-	-	24.4.62	London	340.	8.	-	1.5.63	Rotterdam/Leith	192.	13.	2.	25.4.64	London	237.	10.	-.
17.4.61	Holland	301.	11.	-	26.4.62	Rotterdam	82.	1.	-	3.5.63	London	595.	5.	2.	26.4.64	London	150.	-	-.
20.4.61	Holland	923.	1.	-	1.5.62	London	659.	16.	-	6.5.63	Liverpool	672.	17.	2.	28.4.64.	Liverpool	295.	10.	-.
27.4.61	London	610.	5.	2.	4.5.62	Liverpool	344.	12.	2	8.5.63	Rotterdam/Leith	207.	10.	-	29.4.64	London/Leeds	460.	-	-.
28.4.61	United Kingdom	405.	-.	-.	5.5.62	Liverpool	336.	12.	2	9.5.63	United Kingdom	405.	-.	-	30.4.64	Rotterdam	312.	10.	-.
29.4.61	Glasgow	304.	2.	2.	4.5.62	London	-	2.	-	12.5.63	Liverpool	325.	-.	-	30.4.64	United Kingdom	484.	6.	2.
25.4.61	Rotterdam	277.	-.	-.	10.5.62	Trieste	10.	-	-	13.5.63	Rotterdam/Leith	598.	12.	-	1.5.64	Rotterdam	750.	-.	-.
28.4.61	Rotterdam	640.	16.	-.	12.5.62	London	685.	4.	2	13.5.63	London	768.	13.	-	3.5.64	United Kingdom	775.	7	2.
2.5.61	United Kingdom	530.	-.	-.	14.5.62	Liverpool/Glasgow	140.	-.	-.	16.5.63	Leith	250.	-.	-	10.5.64	Liverpool	909.	13.	-.
5.5.61	Liverpool	285.	14.	-	15.5.62	Rotterdam	480.	-.	-.	16.5.63	R tterdam/Leith	625.	-.	-	12.5.64	Rotterdam	567.	10.	-.
7.5.61	Holland	641.	-.	-	17.5.62	London	377.	10.	-.	17.5.63	London	507.	10.	-	13.5.64	London	508	-	-
8.5.61	United Kingdom	500	-	-	19.5.62	London	125.	-.	-.	17.5.63	London	460.	-.	-	14.5.64	Rotterdam/London	977.	5.	2.
10.5.61	London	10.	5.	2.	19.5.62	Rotterdam	374.	19.	2.	21.5.63	London	325.	-	-	16.5.64	London	175.	-	-
11.5.61	United Kingdom	450	-	-	19.5.62	Liverpool	287.	1.	-.	21.5.63	London	492.	10.	-	23.5.64	London	176.	4.	-
13.5.61	Holland	518.	16.	-	22.5.62	London	100.	-	-	22.5.63	Rotterdam	528.	15.	-	27.5.64	R tterdam	338.	11.	2
30.5.61	Holland	111.	1.	-	24.5.62	Liverpool	121.	15.	-	25.5.63	R tterdam/Leith	367.	9.	2	1.6.64	London	254.	16.	-
9.6.61	Holland	42.	10.	-	26.5.62	Holland/Leith	355.	5.	2.	25.5.63	Liverpool/Glasg.	1049.	15.	-	2.6.64	L verpool	93.	15.	2
16.6.61	United Kingdom	258.	-	-	5.6.62	Gothenburg(Sweden)	-	-.	3	29.5.63	Holland	200.	-.	-					
					8.6.62	U.K. Port	54.	7.	-	30.5.63	London	583.	10.	-					
										1.6.63	Liverpool	425.	5.	2.					
										6.6.63	Rotterdam/Leith	173.	10.	2					
		9767.	9.	-			5421.	8.	3.			11173	5	2			8842	11.	-

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ONIONS EXPORTED 1961-64 SEASONS

DATE	DESTINATION	QUANTITY Tons.	Cwt.	Qrs.
9.6.61	Holland	31.	11.	-
16.6.61.	U.K.	122.	10.	-
17.6.61	London	137.	1.	-
21.6.61	Holland	255.	-.	2.
30.6.61	London	59.	17.	2.
25.6.61	London		7.	1.
7.8.61	Germany		7.	1.
		606.	14.	2.

UNITED KING.	319.	15.	3.
HOLLAND	286.	11.	2.
GERMANY	-	7.	1.
	606.	14.	2.

DATE	DESTINATION	QUANTITY Tons.	Cwt.	Qrs.
19.6.62	Glasgow	200.	-.	-.
20.6.62	R tterdam/Leith	195.	-.	-.
22.6.62	Liverpool	65.	-.	-.
24.6.62	Rotterdam/Leith	111.	10.	-
25.6.62	London	552.	10.	-.
26.6.62	London	200	-.	-.
28.6.62.	London	250.	-.	-.
28.6.62	London	273.	4.	3.
28.6.62.	London	50.	-.	-.
3.7.62	London	181.	16.	2.
11.7.62	London	381.	3.	2.
17.7.62	Sweden	-.	-.	2.
13.11.62	Tripoli	15.	13.	-.
23.11.62	Tripoli	28.	11.	-.
1.12.62	Tripoli	30.	19.	2.
10.12.62	Tripoli	332.	6.	-.
		2,567.	14.	3.

UNITED KING.	2,276.	4.	3.
HOLLAND	184.	-.	-;
TRIPOLI	107.	9.	2.
SWEDEN	-	-.	2
	2,567.	14.	3.

DATE	DESTINATION	QUANTITY Tons.	Cwt.	Qrs.
12.1.63	Tripoli	24.	16.	2.
22.1.63	Tripoli	17.	3.	2.
2.2.63	Tripoli	7.	4.	-.
23.6.63	Rotterdam	125.	-.	-.
27.6.63	London	597.	9	2
27.6.63.	London	378.	19.	2.
28.6.63	Liverpool	100.	-.	-.
2.7.63	London	105.	8.	-.
2.7.63	Leith	25.	-.	-.
6.7.63	Rotterdam	208.	5.	-.
6.7.63	Liverpool	93.	11.	-.
9.7.63	Liverpool/ Glasgow	252.	13.	-.
13.7.63	London	205.	2.	2.
23.7.63	London	5.	7.	2.
		2,146.	-	-.

UNITED KING.	1,763.	11.	-.
HOLLAND	333.	5.	-.
TRIPOLI	49.	4.	-.
	2,146.	-.	-.

DATE	DESTINATION	QUANTITY Tons.	Cwts.	Qrs.
18.6.64.	U.K/Continent	417.	1.	2.
20.6.64	Rotterdam	62.	10.	-.
23.6.64	Liverpool	341.	1.	2.
26.6.64	Liverpool	350.	-.	-.
30.6.64	London	398.	11.	2.
1.7.64	U.K.	222.	10.	-.
2.7.64	London	309.	1.	-.
8.7.64	U.K.	148.	-.	2.
10.7.64	London	21.	10.	-.
		2,270.	6.	-.

UNITED KINGDOM	1,999.	5.	1.
HOLLAND	271.	-	3.
	2,270.	6.	-.

SALES FROM PITKALI MARKETS

VEGETABLES

VEGETABLES	1960		1961		1962		1963		1964	
	WEIGHT	VALUE	WEIGHT	VALUE	WEIGHT	VALUE	WEIGHT	VALUE	WEIGHT	VALUE
		£		£		£		£		£
ARTICHOKES (G)	930,281	6,964	1,090,510	9,572	827,326	9,769	974,038	12,500	816,212	11,269
ARTICHOKES (J)	88,655	2,105	66,639	2,274	73,068	2,316	69,914	1,950	83,917	2,254
BEANS BROAD	555,275	15,401	491,946	8,658	583,929	13,113	798,159	9,711	487,592	6,548
BEANS FRENCH	67,483	3,636	48,636	3,011	49,241	2,723	64,797	2,610	66,518	3,403
BEETROOT (UNI.)	190,491	2,178	196,962	2,024	239,898	2,158	209,027	1,932	184,859	1,827
BELLPEPPER	148,701	4,005	194,228	5,801	191,632	5,493	240,297	4,685	187,088	3,892
BROCCOLI	1,616	49	998	32	1,598	36	227	16	912	29
BRUSSELS SPROUTS									3,655	581
CABBAGES	1,968,038	21,015	1,649,823	21,034	1,731,658	27,106	2,223,024	23,144	2,377,566	23,747
CARROTS (T)	12,200	103	9,751	86	11,978	110	10,049	86	20,023	157
CARROTS (UNT.)	1,000,240	12,594	1,107,476	14,464	1,163,134	13,937	1,342,436	14,803	1,375,355	14,176
CAULIFLOWERS(T)	3,074,471	23,296	3,101,728	24,345	2,155,404	29,886	2,991,617	32,920	2,107,823	22,950
CAULIFLOWERS (UNT)	1,333,747	20,115	1,174,792	21,069	1,566,994	22,723	1,545,643	15,218	1,745,635	24,163
CELERY	297,341	4,408	348,246	5,132	303,049	5,017	356,889	5,019	388,125	4,561
CENTENARY	1,090	28	975	414	55	1	284	6	580	9
CHICKPEAS	66,038	723	34,023	414	50,385	562	72,799	726	45,818	423
CUCUMBERS	124,929	2,974	127,863	3,051	101,415	3,400	116,913	3,236	148,058	3,959
EGGPLANT	178,399	3,766	221,085	4,535	184,162	4,168	237,304	4,109	179,315	3,078
ENDIVE	183,805	1,377	189,125	2,026	246,349	2,251	252,836	2,077	198,008	1,900
GARLIC DRY	24,872	1,048	7,351	880	25,065	1,438	70,684	1,066	6,016	441
GARLIC GREEN	146,143	1,600	82,028	5,208	145,686	5,948	242,376	3,290	140,676	4,597
GOURDS	212,840	2,825	256,073	3,431	240,124	3,549	372,681	4,413	230,301	3,024
FENNEL	1,014	11	263	2	264	2	22	-	1,638	19
KOHLRABI	1,668,663	17,444	1,609,113	18,113	1,720,090	17,809	1,750,561	18,202	1,577,340	17,778
LEEKS	10,178	121	8,441	114	7,479	70	10,534	90	8,543	89
LETTUCE	915,858	17,954	971.519	17,517	875,268	17,810	928,906	16,784	794,757	13,819
MARROWS LONG	449,641	6,451	571,790	12,039	477,967	7,145	471,871	5,805	398,549	4,298
MARROWS VEG.	918,475	28,790	897,617	28,438	1,038,292	28,736	1,123,313	26,594	1,139,653	26,094
MINT HERBS	611	14	748	18	465	11	300	6	714	13
ONIONS DRY	742,710	20,171	738,279	22,052	1,069,075	18,389	1,381,810	13,528	884,724	22,924
ONIONS GREEN	298,129	2,399	531,002	9,524	627,966	6,418	424,700	2,817	450,540	5,293
ONIONS PICKLES	1,455	32	1,885	37	6,939	125	9,589	158	3,951	94

	1960		1961		1962		1963		1964	
	WEIGHT	VALUE	WEIGHT	VALUE	WEIGHT	VALUE	WEIGHT	VALUE	WEIGHT	VALUE
PARSLEY	44,559	1,081	46,166	1,323	49,982	1,351	48,268	1,295	61,946	1,209
POTATOES SPRING	2,444,278	59,448	3,156,012	74,694	1,933,677	66,974	3,540,468	63,345	3,575,471	76,967
POTATOES WINTER	2,282,077	38,248	2,038,004	79,738	2,113,081	49,317	2,213,074	54,967	2,165,692	45,173
PUMPKINS	1,153,767	19,877	1,105,628	21,209	1,222,543	20,729	1,042,943	20,524	1,202,429	13,787
PEAS	242,445	13,349	244,139	9,558	150,345	7,742	267,237	9,281	186,125	10,025
RADISHES	1,056	38	4,450	206	5,490	216	5,396	133	2,793	74
SEAKLE BEET	222	2	880	12	571	7	737	4	1,209	15
SPINACH	287,286	5,563	329,321	6,104	300,729	4,737	285,876	4,252	296,877	5,021
TOMATOES	557,206	23,191	558,511	26,283	704,401	32,340	746,744	31,067	601,184	26,330
TOMATOES R.	925,680	20,899	1,028,668	21,574	773,014	15,169	970,486	14,833	1,048,106	15,300
TOMATOES O.	1,436,894	23,558	1,942,988	29,371	908,564	15,136	966,114	13,225	998,045	10,465
TURNIPS	1,650	26	5,054	82	369	9	5,013	68	51,771	3,011
		£428,877		£515,469		£465,992		£440,495		£434,786

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TABLE No. 8

SALE FROM PITKALI MARKETS

FRUITS

FRUIT	1960 WEIGHT	1960 VALUE	1961 WEIGHT	1961 VALUE	1962 WEIGHT	1962 WEIGHT	1963 VALUE	1963 WEIGHT	1964 VALUE	1964 VALUE
APPLES ...	500,679	14,469	402,213½	12,273	85,689	4,938	242,150	8,645	169,326	7,798
APRICOTS ...	2,424	241	4,136½	528	5,509½	564	2,156	257	1,256	168
BAMBINELLA ...	40,243	2,922	20,153	1,285	11,324½	1,126	26,138	1,904	35,342	2,830
BANANA (Heads) ...	5,139	64	3,885	52	2,757	37	942	11	524	6
BLACKBERRIES ...	3,034	231	4,033½	266	4,524¼	310	7,517	502	1,624	119
CHERRIES ...	25	7	-	-	20½	9	-	-	65	19
FIGS DRY ...	6,235	191	6,771	242	1,829	63	2,699	89	2,149	83
FIGS EARLY ...	257,972	7,370	162,485½	4,796	137,519¼	4,876	194,342	5,865	250,493	7,049
FIGS LATE ...	40,475	1,196	40,115½	930	33,798½	1,285	44,196	1,203	45,571	1,393
GRAPES ...	575,409	22,088	558,167½	24,711	513,484	20,346	514,467	18,421	456,898	16,664
GRAPEFRUIT ...	86	19	36	5	1,043	124	35	8	60	12
LEMONS (Dozen) ...	63,784	4,720	67,924	5,764	69,406	5,145	40,318	4,717	80,482	5,805
LEMONS SWEET (Dozen)	-	-	118½	8	132	7	50	3	78	4
MEDLARS ...	27,053	1,059	35,010	1,027	19,658	656	34,043	1,203	8,055	355
MELONS SUGAR ...	365,746	9,315	347,640	8,788	302,603	9,363	628,270	12,743	533,370	9,491
MELONS WATER ...	441,322	8,253	376,487	10,032	341,238	9,349	464,768	9,542	447,291	7,340
MELONS WINTER ...	165,210	2.970	151,097	3,533	171,250	3,248	251,009	4,077	302,907	5,860
MULBERRIES ...	4,046	110	3,917	98	2,143	67	5,341	127	2,621	82
NECTARINES ...	248	18	1,588	67	346	16	1,022	49	596	38
OLIVES ...	223	7	688	26	164	10	1,542	35	211	8
ORANGES (Dozen) ...	53,823	4,636	62,119	5,690	26,160	2,779	39,132	51,832	51,407	6,024
ORANGES SWEET (Dozen)	10,846	1,178	7,734	1,334	3,888	559	7,443	877	10,773	1,583
PEACHES ...	152,574	13,116	437,933	23,179	151,615¼	13,379	597,743	29,643	260,012	18,722
PEARS ...	36,785	2,185	38,300	3,170	15,579	1,100	55,011	2,894	42,307	2,015
PEARS PRICKLY ...	60,059	391	56,189	397	62,883	497	21,583	164	69,354	421
PLUMS ...	14,495	1,481	115,213½	3,207	39,622	3,595	59,861	4,468	73,929	4,755
PLUMS CHERRY ...	79,091	5,539	185,420½	6,698	115,105	6,296	70,366	2,944	225,240	9,872
POMEGRANATES ...	166,552	2,255	156,742	3,126	63,840	1,506	81,235	1,690	80,679	1,909
PRUNES ...	203	17	404	27	25	3	922	41	263	17
STRAWBERRIES (Eng.)	36,845	6,803	52,935	9,865	41,101	7,954	60,768	11,778	54,775	9,726
STRAWBERRIES Local	3,556	1,602	2,339	1,206	1,055	621	822	531	7,816	631
TANGERINES (Dozen)	17,595	1,245	11,556	1,064	4,559	547	8,199	893	14,488	1,655
		£115,888		£133,853		£100,375		£129,156		£122,453

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Table 9

Yearly enumeration of Livestock 1954-64

Year	Caprines		Ovines		Bovines		Swine		Equines		Poultry and Rabbits	
	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo	Malta	Gozo
1954	27,279	15,129	11,666	7,616	5,439	2,035	20,576	5,024	5,320	2,355	192,096	136,097
1955	29,906	14,859	11,366	7,630	5,404	1,531	10,994	1,617	5,282	2,016	274,893	154,730
1956	29,172	14,812	10,299	6,422	7,170	1,972	13,183	1,990	5,339	1,911	270,146	155,673
1957	25,611	13,726	9,204	5,614	7,066	2,661	10,493	2,805	4,955	1,825	244,473	144,042
1958	23,743	13,201	9,233	5,778	7,626	2,172	12,381	3,981	4,748	1,827	252,588	157,307
1959	22,625	13,246	8,649	5,616	7,429	2,107	12,094	2,701	4,587	1,757	249,502	131,840
1960	21,010	13,678	7,909	5,107	7,206	2,172	11,217	2,829	4,422	1,698	264,515	132,513
1961	18,587	12,425	7,190	4,413	6,282	1,809	12,507	3,885	4,290	1,603	264,320	148,983
1963	17,225	13,083	6,524	4,538	6,566	2,013	12,414	3,343	3,978	1,619	280,353	144,283
1964	16,388	12,741	6,513	4,709	6,001	1,986	10,428	2,990	3,833	1,500	322,528	149,769

Table 10

Diseases and other causes of unsoundness of meat from 1st January to 31st December, 1964

Disease	Cattle	Pigs	Sheep	Goats	Lambs	Kids	Equines	Total
Emaciation	-	1	-	-	-	-	-	1
Leukaemia	-	-	-	1	-	-	-	1
Mastitis	-	-	3	2	-	-	-	5
Nephritis	2	-	-	-	-	-	-	2
Pneumonia	2	-	-	-	-	-	-	2
Putrefaction	5	4	1	1	-	-	-	11
Septicaemia	1	3	8	11	2	-	-	25
Swine Erysipelas	-	1	-	-	-	-	-	1
Tuberculosis	4	-	-	-	-	-	-	4
Swine Fever	-	1	-	-	-	-	-	1
Total	14	10	12	15	2	-	-	53

Table 11

Vaccination of pigs and inoculation of poultry from 1st January to 31st December 1964

M A L T A

Month	POULTRY			SWINE	
	Fowl Typhoid & Fowl Cholera	Fowl Pest	Fowl Pox	Swine Erysipelas	Swine Fever
January	600	2,770	7,382	98	481
February	200	3,260	5,795	113	361
March	500	4,730	9,321	305	557
April	-	6,515	4,567	108	738
May	70	3,045	9,436	217	969
June	150	4,924	8,104	160	1,132
July	650	5,692	8,010	279	1,023
August	870	2,650	3,024	268	602
September	120	3,010	5,226	114	759
October	-	3,270	5,790	199	625
November	-	2,275	2,660	113	905
December	-	3,720	3,790	199	852
Total	3,160	45,861	73,105	2,173	9,054

G O Z O

January	-	2,500	4,000	175	25
February	-	1,750	5,000	75	210
March	-	4,000	2,575	60	60
April	-	-	-	100	200
May	-	5,000	-	95	10
June	-	6,000	7,500	25	100
July	-	-	7,000	170	25
August	-	-	-	-	-
September	-	100	200	-	-
October	-	300	-	73	91
November	-	250	200	60	85
December	-	400	-	-	60
Total	-	20,300	26,475	833	866

Table 12

Stocks of imported store cattle during the year 1st January to 31st December, 1964

Month	Importation		Total	Slaughtered		Total slaughtered	Balance	
	Bulls	Bullocks	imported	Malta	Gozo		-	-
		Stocks on hand on 1st January, 1964						3076
January	-	235	235	696	24	720	485	
February	-	499	499	592	35	627	128	
March	-	384	384	548	25	573	189	
April	-	435	435	656	14	670	235	
May	-	412	412	542	21	563	151	
June	-	611	611	602	18	620	9	
July	-	876	876	663	20	683	-	133
August	-	1350	1350	623	28	651	-	699
September	-	2185	2185	603	18	621	-	1564
October	-	321	321	706	22	728	407	-
November	-	318	318	634	20	654	336	-
December	-	-	-	720	25	745	745	-
Totals	-	7626	7626	7585	270	7855	2685	5532

Stock on hand on 1st January, 1964	- 3076
Imported during 1964	- 7626
	10702
Slaughtered during 1964	- 7855
Stock on hand on 1st January, 1965	2847

Slaughtered Store Cattle during 1960-64

Year	Imported	Local	Total
1960	10,834	2,835	13,669
1961	9,442	2,800	12,242
1962	9,822	2,718	12,540
1963	8,070	2,570	10,640
1964	7,855	2,305	10,160

Table 13

Slaughterings 1st January to 31st December, 1964

MALTA

Month	Cattle	Pigs	Sheep	Lambs	Goats	Kids	Equines
January	824	2796	501	657	631	44	55
February	713	2393	371	538	562	101	40
March	689	2279	511	171	425	364	38
April	801	2644	549	134	515	240	39
May	683	2250	440	75	512	199	41
June	817	2201	359	14	544	101	52
July	842	2064	411	29	542	70	48
August	825	1904	432	75	536	29	57
September	746	1878	527	396	462	19	41
October	833	2165	600	1563	557	38	43
November	748	1947	480	1234	59[illegible]	58	36
December	814	2616	511	708	653	73	36
No.of animals	9335	27137	5692	5594	6529	1336	526
Total weight(rtal)	2704667	2251676	209255	52693	160498	7109	108469
Average weight	289	92	36	9	25	5	206

GOZO

January	64	268	35	115	27	22	1
February	69	271	37	81	36	17	1
March	54	216	34	136	37	57	1
April	65	187	27	52	34	74	-
May	61	186	22	20	17	46	-
June	62	196	9	3	11	8	-
July	75	193	11	-	9	12	-
August	83	165	17	2	3	4	-
September	74	168	15	31	21	-	1
October	74	185	25	314	14	15	1
November	72	179	27	276	23	26	1
December	72	214	34	167	29	18	1
No.of animals	825	2428	293	1197	261	299	7
Total weight(rtal)	249306	223701	7781	12278	5073	1766	1707
Average weight	362	92	26	10	19	6	244

Slaughterings 1960-64 Total weight in rtal

	Cattle	Pigs	Sheep	Lambs	Goats	Kids	Equines
1960	3,755,391	2,491,978	214,729	66,014	255,696	8,328	150,724
1961	3,697,800	2,669,679	204,491	59,492	186,177	7,280	134,435
1962	3,862,497	3,192,017	160,802	55,515	155,293	9,309	98,406
1963	3,085,510	2,890,820	141,674	42,502	160,391	6,061	105,759
1964	2,953,973	2,475,377	217,036	64,971	165,571	8,875	110,176

Table 14

Respective weights in rotoli of animals slaughtered during 1964

M A L T A

Month	Cattle	Pigs	Sheep	Lambs	Goats	Kids	Equines
January	236052	232373	18066	6444	16269	237	10792
February	198689	195865	14076	5271	13761	579	8310
March	194731	186257	18791	1667	10484	1825	7955
April	229623	220725	20089	1316	12626	1277	7830
May	196415	192477	16065	740	12546	1128	8780
June	249465	183200	13170	138	12169	507	10890
July	257230	173249	15073	298	13324	382	10035
August	240659	155140	15950	686	13204	153	11570
September	207954	154863	19279	3653	11443	99	8230
October	241590	177451	21976	14365	13726	201	8990
November	216071	163614	17962	11336	14572	322	7523
December	236188	216462	18758	6779	16374	399	7564
Total	2704667	2251676	209255	52693	160498	7109	108469

G O Z O

January	21923	24203	903	1216	496	146	254
February	19667	24770	947	877	649	104	252
March	16811	19557	938	1391	697	340	210
April	21442	13059	640	542	665	408	-
May	16061	17612	544	190	329	261	-
June	14303	18000	236	28	45	54	-
July	14197	18052	282	-	249	75	-
August	29318	16006	446	20	64	24	-
September	23399	16284	386	301	403	-	210
October	25071	17898	743	3174	287	92	250
November	22257	17464	771	2810	472	156	276
December	24857	20796	945	1729	717	106	255
Total	249306	223701	7781	12278	5073	1766	1707
Grand Total	2953973	2475377	217036	64971	165571	8875	110176

TABLE 15

CO - OPERATIVE SOCIETIES

i) Cooperative Societies on Registrar as on:-

	31.12.60	31.12.61	31.12.62	31.12.63	31.12.64
Primary					
Agricultural Produce ...	15	15	15	15	15
Agricultural Equipment ...	2	2	2	3	3
Tailors (supply) ...	1	1	1	1	1
Milk Producers ...	1	1	1	1	1
Consumers ...	3	3	3	3	3
Milk & Agricultural Producers ...	1	1	1	1	1
Wine Producers ...	1	1	1	1	1
Poultry Breeders ...	-	-	-	-	2
Fishermen's ...	-	-	-	-	1
Central					
Agricultural ...	1	1	1	1	1
	25	25	25	26	29

ii) Principal Items of Assets and Liabilities of Cooperative Societies as on:-

	31.12.60	31.12.61	31.12.62	31.12.63	31.12.64
Liabilities					
Share Capital Contributions ...	39,854	44,871	59,109	55,679	
Reserves and Provision ...	10,641	12,666	16,068	15,133	
Loans and Deposits received ...	38,054	33,511	29,599	14,813	
Creditors ...	89,745	105,779	117,402	112,120	
Disposable Balance ...	9,089	11,446	14,875	11,951	
	£187,383	£208,273	£237,053	£209,696	
Assets					
Immovable Property ...	90,723	94,244	92,699	95,669	
Movable Property and Stock in Hand	20,837	28,498	35,688	41,345	
Debtors ...	31,770	39,058	53,835	41,999	
Investments ...	16,055	20,155	20,268	625	
Cash and Bankers ...	27,998	26,318	34,563	30,058	
Loss ...	-	-	-	-	
	£187,383	£208,273	£237,053	£209,696	

NOT AVAILABLE

iii) The number of members has been approximately as shown 3,080 3,080 3,080 3,100 3,250

Table 16

Local Catch and Imports of Fresh Fish 1953/64

Year	Local (cwts)	Wholesale Value	Imported (Cwts)	Wholesale Value
		£		£
1953	19,669	135,855	4,221	33,564
1954	17,243	114,299	3,539	34,732
1955	17,366	135,017	2,676	25,141
1956	16,775	135,720	2,099	23,635
1957	18,015	168,285	2,022	24,387
1958	21,101	204,115	2,478	22,387
1959	20,791	200,729	1,355	15,162
1960	24,341	227,053	1,751	18,809
1961	27,006	236,601	1,610	21,345
1962	26,343	248,770	1,167	15,658
1963	29,815	283,207	976	14,786
1964	26,955	324,094	528	9,293

MONTHLY RETURN - 1964

Locally Caught Fresh Fish

SPECIES	JANUARY RTAL	FEBRUARY RTAL	MARCH RTAL	APRIL RTAL	MAY RTAL	JUNE RTAL	JULY RTAL	AUGUST RTAL	SEPTEMBER RTAL	OCTOBER RTAL	NOVEMBER RTAL	DECEMBER RTAL	TOTAL RTAL
1. ACCOLA	-	-	-	-	203	326	423	560	618	210	-	-	2,340
2. ARZNEL/MUNQAR	6,902	13,307	20,198	44,641	10,730	14,913	-	-	-	-	-	5,602	116,293
3. BOLL/HAM/RAJ	1,334	2,225	2,467	4,943	3,923	2,234	4,098	217	217	-	538	1,480	24,257
4. CERNA	-	210	320	550	831	1,082	1,811	1,141	294	357	546	321	7,463
5. DENTICI	-	-	-	448	379	394	969	399	591	467	629	752	5,028
6. DOTT/HANZIR	208	222	233	362	1,107	4,117	2,100	216	-	-	-	-	8,565
7. FANFRI	-	-	-	-	-	-	-	-	32,644	18,264	7,656	650	59,234
8. FEKRUNA	-	-	-	-	-	-	-	-334	878	643	-	-	1,855
9. GALLINA	279	459	730	1,343	643	1,331	642	-	---	-	-	326	5,753
10. GAMBLI	1,130	1,271	918	1,084	346	308	807	705	803	286	264	-	7,922
11. HUTA KAHLA	2,003	2,249	5,288	3,118	2,294	1,090	566	304	-	-	553	4,315	21,780
12. IMSELL	200	210	-	-	-	-	-	1,338	682	1,089	-	-	3,159
13. KAHLI	1,085	1,329	1,398	1,667	1,891	1,960	1,296	1,573	683	794	318	1,112	15,106
14. KAVALLI	802	-	-	-	-	607	33,318	6,281	6,601	-	2,590	-	50,199
15. KLAMARI	456	768	-	-	-	-	-	-	340	- -	-	665	2,229
16. LACCI	-	-	270	-	3,447	2,893	3,378	532	-	-	-	-	10,520
17. LAMPUKI	-	-	-	-	-	-	-	4,522	212,107	189,331	105,941	4,283	516,184
18. MAKKU	-	-	-	-	-	596	3,614	6,583	3,419	847	—	-	15,061
19. MAZZOLA	1,367	1,393	915	4,231	4,109	4,501	3,367	361	228	-	-	1,291	21,763
20. MERLUZ	-	266	-	-	462	-	-	-	231	-	-	-	959
21. MIRLI	-	-	-	-	-	-	608	847	-	-	-	-	1,455
22. MORINA	1,531	1,328	702	1,517	2,052	3,510	1,492	-	-	296	-	229	12,657
23. MULETT	-	240	308	351	-	-	666	913	330	916	215	290	4,229
24. PAGEL	641	1,169	1,192	1,620	1,001	-	393	-	-	-	581	1,512	8,109
25. PAGRI	-	-	-	438	441	736	685	-	-	-	-	209	2,509
26. PIXXIPLAMTU	927	352	2,016	1,972	274	-	-	-	-	-	-	1,109	6,650
27. PIXXISPAD	-	-	-	-	8,934	4,581	32,398	8,823	-	903	1,839	3,162	60,640
28. PLAMTU	-	365	-	-	283	-	-	-	-	-	-	-	648
29. QARNIT	1,884	4,574	1,364	3,882	4,643	2,963	2,800	1,681	2,521	2,422	2,693	2,692	34,119
30. SARDIN	-	-	-	-	420	-	-	-	-	-	-	-	420
31. SARGU	314	236	511	952	1,009	650	715	211	349	-	744	567	6,258
32. SAWRELL	77,122	11,070	3,575	2,097	24,750	39,100	36,048	16,196	14,922	1,288	5,090	12,947	244,205

33. SICC	-	-		278	-	-	-	-	-	-	-	-	278
34. SIRRAN	1,518	2,142	1,841	2,316	1,381	2,343	503	1,482	-	-	1,224	1,187	15,937
35. SKØRFON	-	-	-	-	312	293	-	-	-	-	-	-	605
36. TONN	1,972	444	-	-	-	-	-	-	-	-	3,481	722	6,619
37. TONNAGG	-	-	-	-	-	-	-	-	2,975	3,153	258	-	6,386
38. TRILL	847	622	570	1,659	1,945	6,673	364	-	-	-	-	685	13,365
39. TURMBRELL	485	1,163	903	2,080	4,274	-	-	-	-	-	-	-	8,905
40. VOPI/VOPARELLI	23,169	37,262	42,678	6,270	33,153	31,479	30062	28,379	17,776	19,331	38,988	27,117	336,724
41. XILEP	270	499	875	1,368	1,382	1,273	1,980	1,383	1,430	1,144	1,010	767	13,381
42. XKATLU	-	-	-	213	290	208	301	-	-	-	-	-	1,012
43. XURRAF	-	-	-	-	-	1,330	814	-	-	-	-	-	2,144
44. ZAGHRUN	479	442	-	224	-	285	1,137	-	-	-	324	-	2,891
45. HUT IMHALLAT	1,686	1,435	-	3,015	5,119	9,537	4,748	5,205	1,879	1,847	1,701	2,354	38,946
	128,611	87,252	89,272	92,639	122,028	141,313	172,099	91,193	302,538	243,588	178,183	76,406	1,725,122

jgd.

TABLE 13

AVAILABILITY OF FRESH FISH

COMPARATIVE SUMMARY OF FRESH FISH LANDINGS-1963/64

Year	LOCAL Quantity Rtal	LOCAL Wholesale Value £	LOCAL Retail Value £	LOCAL Average Ret.Price Per Ratal	IMPORTED Quantity Rtal	IMPORTED Wholesale Value £	IMPORTED Retail Value £	IMPORTED Average Ret.Price Per Ratal	Total Quantity Rtal
1963									
January	94,100	9,893	15,379	3/3	1,410	257	361	5/2	95,510
February	73,635	11,107	14,760	4/-	-	-	-	-	73,635
March	74,873	13,116	17,407	4/8	6,800	1,218	1,357	5/6	81,673
April	98,772	16,546	21,253	4/4	3,582	636	904	5/1	102,354
May	126,767	18,011	24,620	3/11	9,796	2,685	3,664	7/6	136,563
June	137,770	20,595	29,351	4/3	22,575	5,924	8,746	7/9	160,345
July	155,818	18,144	25,835	3/10	14,969	3,443	4,990	6/8	170,787
August	183,789	32,628	45,034	4/11	-	-	-	-	183,789
September	347,903	54,353	75,358	4/4	-	-	-	-	347,903
October	373,866	47,088	75,326	4/-	-	-	-	-	373,866
November	167,547	27,964	36,677	4/4	2,160	420	582	5/5	169,707
December	73,306	13,762	17,651	4/10	1,210	203	300	4/11	74,516
Total	1,908,146	283,207	398,651	-	62,502	14,786	21,404	-	1,970,648
1964									
January	128,611	13,536	19,910	3/1	2,906	629	847	5/10	131,517
February	87,252	15,384	19,976	4/7	-	-	-	-	87,252
March	89,272	17,210	21,745	4/11	800	112	171	4/3	90,072
April	92,639	16,094	20,784	4/6	-	-	-	-	92,639
May	122,028	21,678	28,051	4/7	11,322	3,134	4,266	7/6	133,350
June	141,313	23,016	31,740	4/6	11,354	3,480	4,616	8/2	152,667
July	172,099	29,143	40,763	4/9	4,996	1,254	1,873	7/6	177,095
August	91,193	17,635	23,727	5/2	1,311	280	411	6/3	92,504
September	302,538	67,253	85,606	5/8	1,121	404	528	9/5	303,659
October	243,588	51,023	61,431	5/1	-	-	-	-	243,588
November	178,183	35,816	48,461	5/5	-	-	-	-	178,183
December	76,406	16,305	20,756	5/5	-	-	-	-	76,406
Total	1,725,122	324,094	422,950	-	33,810	9,293	12,712	-	1,758,932

TABLE 19

GRANTS AND LOANS ISSUED DURING 1964

CONSTRUCTION OF CRAFT COMPLETE WITH ENGINES				REPLACEMENT OF ENGINES				FISHING EQUIPMENT			
REQ. NO.	LOANS	GRANTS	TOTAL	REQ.NO.	LOANS	GRANTS	TOTAL	REQ. NO.	LOANS	GRANTS	TOTAL
								85/63-64	240	40	280
				64/63-64		160	160				
								76/63-64	198	33	231
				78/63-64		100	100				
30/63-64	698	387	1,085								
				67/63-64		100	100				
								86/63-64	60	10	70
				65/63-64		114	114				
								61/63-64	498	83	581
				28/63-64		288	288				
								84/63-64	84	14	98
				69/63-64		464	464				
								81/63-64	132	22	154
				75/63-64		242	242				
								89/63-64	132	22	154
				42/63-64		226	226				
								62/63-64	179	30	209
66/63-64	1,564	868	2,432								
51/63-64	535	297	832								
								82/63-64	72	12	84
								90/63-64	210	35	245
59/63-64	1,800	1,002	2,802								
								88/63-64	60	10	70
	4,597	2,554	7,151		-	1,694	1,694		1,865	311	2,176

TOTAL Loans ..... £6,462. -. -.
TOTAL Grants ..... 4,559 -. -.
£11,021 -. -.

jgd.

Table 20

A G R I C U L T U R E

(i) Ordinary Expenditure 1959/65

	A. PERSONAL EMOLUMENTS						B. OTHER CHARGES					
	Actual 1959/60	Actual 1960/61	Actual 1961/62	Actual 1962/63	Actual 1963/64	Estimates 1964/65	Actual 1959/60	Actual 1960/61	Actual 1961/62	Actual 1962/63	Actual 1963/64	Estimates 1964/65
	£	£	£	£	£	£	£	£	£	£	£	£
Office	17,321	18,864	21,943	20,398	15,768	20,406	-	-	-	-	-	-
Advisory Service	1,810	2,557	3,898	4,971	6,019	6,480	-	-	-	-	-	-
Govt. Farm	4,257	4,675	5,448	5,619	5,764	5,708	42,853	44,747	40,941	41,917	37,118	36,165
Gardens, Plantations, Afforestation	24,411	25,107	31,128	29,617	29,430	30,978	29,123	27,826	31,029	27,922	27,997	28,295
Plant Pathology Viticulture and Oenology	1,818	2,476	2,568	2,590	2,586	2,573	18,637	18,597	14,388	13,475	11,797	13,275
Marketing	2,261	3,008	3,243	4,089	5,446	5,852	1,290	1,279	1,105	1,324	1,340	1,703
Veterinary Services	13,678	14,632	17,212	17,200	17,238	18,138	6,377	6,724	7,393	7,621	7,588	7,459
Fisheries	-	-	-	12,137	12,615	12,967	-	-	-	20,918	20,611	20,585
General Service	-	-	-	-	-	-	9,807	9,852	9,237	10,161	9,326	15,912
Subsidies	-	-	-	-	3,843	-	1,261	1,606	1,706	76,607	72,871	88,295
	65,556	71,319	85,440	96,571	98,709	103,132	109,348	108,611	105,599	199,945	188,657	211,689

Taboe 20 (contd.)

ii) C. Special Expenditure 1959-65

Actual - 1959-60

	£
Purchase of a truck	491
Purchase of a Sprinkler	2,035
Purchase of two cars abd two motor cycles	920
Purchase of livestock for Government Farm	1,025
Purchase of an electrically driven pump	50
Purchase of an adding machine	255
Purchase of a safe	56
	4,832

Actual - 1960-61

Purchase of a truck	621
Purchase of livestock for Government Farm	423
Purchase of two cars and two motor cycles(revote)	40
	1,084

Actual - 1961-62

Purchase of a truck	207

Actual - 1962-63

Erection of a Cold Room at the Buskett Winery	495
Agricultural Delegation to Israel	787
	1,282

Actual - 1963-64

Purchase of livestock for Government Farm	500

Estimates 1964/65

Purchase of livestock for Government Farm	500
Training of a Veterinary Surgeon	1,300
International Congress on Brucellosis	500
Assistance given by one of H.M.'s ships to M.V.Hannibal	810
	3,110

iii) E. Co-operatives - 1959-65

	Actual 1959/60	Actual 1960/61	Actual 1961/62	Actual 1962/63	Actual 1963/64	Estimates 1964/65
A.Personal Emoluments	£ 2,039	£ 2,381	£ 2,709	£ 2,684	£ 6,558	£ 2,827
B.Other Charges	5,399	7,160	7,639	6,451	2,567	7,165
C.Special Expenditure	130	-	-	-	-	-
	7,568	9,541	10,348	9,135	9,125	9,992

iv) F. Pitkali Markets - 1959-65

A.Personal Emoluments	16,930	17,130	18,853	18,776	18,791	19,283
B.Other Charges	3,731	2,932	3,696	3,128	3,929	3,608
C.Special Expenditure	-	431	-	-	-	-
	20,661	20,493	22,549	21,904	22,720	22,891

	1959/1960	1960/1961	1961/1962	1962/1963	1963/1964	1964/1965
AGRICULTURE	£	£	£	£	£	£
a) Colonial Development and Welfare Scheme						
1. Cattle disease eradication scheme A. 3897	23,507	16,393	24,604	25,800	36,680	21,100
2. Animal vaccination scheme D. 4025	5,679	4,626	3,832	2,982	2,825	1,056
3. Incentive Grants D.4250	4,359	8,194	4,665	5,042	3,286	12,660
4. Expenses in connection with experts D. 4233	16,970	14,284	6,422	6,218	3,705	7,773
5. Training of personnel abroad D. 4233	8,117	7,645	5,497	3,347	2,143	4,220
6. Adopted farms D. 4234	204	431	994	143	1,283	2,945
7. Grants to farmers D. 4250	569	13,262	9,013	9,706	18,849	13,200
8. Equipment of crop protection contract spraying service D. 4237	2,143	2,176	414	2,201	1,097	1,769
9. Afforestation D. 3819	24,416	27,431	22,237	14,946	9,820	10,000
10. Modernizing the Civil Abattoir D. 3912	7,967	3,753	2,483	2,512	981	604
11. Improvements to Public Gardens	-	-	-	-	1,309	8,691
11A Equipment for Agricultural Chemistry Laboratroy	-	-	-	-	460	-
12. Cattle Quarantine Station	-	-	-	-	-	26,375
13. Equipping and staffing Research Laboratory	-	-	-	-	-	14,770
14. General development of Horticulture	-	-	-	-	-	50,295
15. Fruit planting incentive grants	-	-	-	-	-	792
16. Development of viticulture	-	-	-	-	-	5,480
17. Mobile steam sterilizing units	-	-	-	-	-	5,803
18. Agricultural produce inspection shed	-	-	-	-	-	9,495
19. Assistance to Co-operatives (Grants)	-	-	-	-	-	10,000
20. Improvements to farmhouses (Grants)	-	-	-	-	-	7,200
21. Establishment of Agricultural Laboratories	-	-	-	-	-	6,330
22. Eradication of swine diseases	-	-	-	-	-	5,000
23. Purchase and adaptation of ex. R.N. Abattoir	-	-	-	-	-	2,000
24. Loans to farmers.	19,368	39,887	36,115	34,933	34,697	19,800
25. Assistance to Co-operatives (Loans)	-	-	-	-	-	2,500
26. Improvements to farmhouses (Loans)	-	-	-	-	-	1,800
	124,299	138,082	116,276	107,830	117,135	251,658
FISHERIES						
27. Grants to F shermen	4,920	-	-	-	21,954	5,500
28. Expropriation of land and old fishponds at Marsaxlokk	-	2	-	-	-	8,998
29. Improvements at Marsaxlokk	-	143	306	151	-	2,500
30. Provision of two winches at Marsaxlokk and Wied iz-Zurrieq	-	-	-	-	-	2,907
31. Construction of holes	-	-	-	-	-	15,825
32. Extension of moles at Wied iz=Zurrieq	-	-	-	-	-	6,330
33. Fishing research	-	-	-	-	-	5,380
34. Sundry Works at Fishing Centres	2,000	2,000	1,998	2,002	2,001	7,385
35. Loans to Fishermen	-	-	-	-	30,875	9,000
	6,920	2,145	2,304	2,153	54,830	63,825

VI REVENUE 1959 - 1964

ITEM	ACTUAL 1959-60	ACTUAL 1960-61	ACTUAL 1961-62	ACTUAL 1962-63	ACTUAL 1963-64	ACTUAL 1964-65
VII. Fees of Office & Reimbursements						
A. Fees of Office						
Agriculture and Fisheries						
Fisheries						
24. Fees for Fish-hawker Arm Badges	15	12	12	10	16	15
25. Permits and Licences	42	52	58	43	38	60
Veterinary Services						
33. Abattoir Fees	19,217	17,108	17,344	19,006	16,693	18,500
Agriculture						
Licences,certificates, etc.	284	251	261	522	360	350
	19,558	17,423	17,675	19,581	17,107	18,925
B. Reimbursements						
Fisheries						
66. Sale of fishing equipment	12,163	11,159	10,505	8,296	9,959	9,000
67. Sale of Fish from experimental fishing vessel	4,783	4,433	1,283	2,115	1,142	6,000
68. Commission on sales of Imported Fish	333	408	400	250	250	400
Agriculture						
88. Sale of vegetables from Govt. Farm.	3,055	2,529	1,694	2,159	2,597	2,500
89. Sale of Livestock from Govt. Farm.	6,214	8,051	4,962	4,888	4,298	4,500
90. Sale of Diary Produce	3,965	3,566	3,554	3,920	2,995	3,300
91. Sale of vine rootlings etc. from vine nurseries	388	651	400	51	10	10
92. Sale of trees, plants, etc. from public plantations.	1,167	1,145	1,649	1,521	1,561	1,500
93. Sale of fruit etc. from S.Anton Gdns.	674	875	628	606	701	600
94. Sale of fruit etc. " Buskett Gardens	1,233	2,117	1,575	1,145	1,776	2,000
95. Sale of fruit etc. from Dar il-Ljuni Gardens.	102	120	118	53	115	100
96. Sale of hatching eggs and poultry from G vernment Farm.	4,810	7,526	7,784	6,133	5,515	7,000
c/f	£38,887	£42,580	£34,552	£31,107	£30,919	£36,910

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ITEM	ACTUAL 1959-60	ACTUAL 1960-61	ACTUAL 1961-62	ACTUAL 1962-63	ACTUAL 1963-64	ACTUAL 1964-65
b/f	38,887	42,580	34,552	31,107	30,919	36,910
97. Sale of Honey	64	-	-	12	30	20
98. Inspection of Agric. produce	1,186	849	561	450	379	500
99. Sale of Wine	1,589	763	747	258	144	100
101. Service by skilled personnel of the Dept. on behalf of third parties	7,931	7,373	4,439	2,760	4,146	4,000
VETERINARY SERVICES						
102. Maintenance of dogs kept under observation.	83	45	67	78	130	100
MISCELLANEOUS REIMBURSEMENTS						
113. Miscellaneous	2,729	489	620	638	408	1,000
	52,469	52,099	40,986	35,303	36,146	42,630
XII INTEREST						
Interest on loans	2,964	2,814	2,718	2,198	2,824	2,000
XIII Widows and Orphans Pension Act 1927						
1. Contributions	978	975	1,016	1,080	1,115	930
XVI Miscellaneous Receipts						
2. Miscellaneous	2,304	1,304	2,099	189	172	1,000
5. Repayment of Loans	417	4,226	12,114	18,971	19,155	25,000
	2,721	5,530	14,213	19,160	19,327	26,000
SUMMARY						
VII. A. Fees of Office	19,558	17,423	17,675	19,581	17,107	18,925
B. Reimbursements	52,469	52,099	40,986	35,303	36,166	42,630
X. Interest	2,964	2,814	2,718	2,198	2,824	2,000
XI. Widows and Orphans	978	975	1,016	1,060	1,115	930
PENSION ACT 1927						
XVI. Miscellaneous Receipts	2,721	5,530	14,213	19,160	19,327	26,000
	£78,690	£78,841	£76,608	£77,322	£76,539	£90,485

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TABLE 21

VALUE OF AGRICULTURAL EXPORT

	1959 £	1960 £	1961 £	TOTAL 1959/61	1962 £	1963 £	1964 £	TOTAL 1962/64
POTATOES	271,665	371,000	379,872	1,022,537	371,000	486,724	246,530	1,104,254
ONIONS	23,897	19,000	14,411	57,308	71,000	51,938	55,915	178,853
CUT FLOWERS, FOLIAGE and PLANT CUTTINGS ...	50,077	57,202	82,136	189,415	130,000	198,361	181,243	509,604
SEEDS AND BULBS ...	3,415	2,959	3,986	10,360	1,617	6,323	8,702	16,642
TOMATOES	50	21	211	282	900	4,677	4,555	10,132
ANIMALS LIVING ...	120	1,276	1,993	3,389	3,426	2,627	6,272	12,325
				£1,283,291				£1,831,810
WINE	17,727	49,491	55,418	122,636	148,000	241,256	299,639	688,895
TOMATO PUREE' ...	301	140	-	441	-	9,623	10,257	19,880
TALLOW	4,210	17,862	6,750	28,822	600	11,960	6,553	19,113
WOOL RAW	4,170	3,300	2,150	9,620	1,172	4,824	2,390	8,386
HORSE HAIR	61	500	420	981	507	720	850	2,077
HIDES AND SKINS ...	89,655	49,017	59,807	198,479	40,693	52,697	34,828	128,218
BONES AND HOOFS ...	-	600	675	1,275	300	700	-	1,000
				£362,254				£867,569
				£1,645,545				£2,699,379

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